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NOTES ON IRRIGATION AND COÖPERATIVE IRRIGATION SOCIETIES IN ILOCOS NORTE [1]

By EMERSON B. CHRISTIE

(From the Museum, Bureau of Science, Manila, P. I.)

One plate

Reports of the Bureau of Public Works state that the Province of Ilocos Norte has some 15,000 hectares under a fairly satisfactory degree of irrigation. Besides this land, there is a considerable area irrigated only during the season of transplanting and growing rice; that is to say, the wet season.

Irrigation works of some sort are to be found in all the municipalities in the province. Bangui and Nagpartian, the two northernmost towns in the province, have together some 1,500 hectares of rice land under irrigation. About nine-tenths of this land is under irrigation only during the wet season, owing to the imperfection of the irrigation works. Neither town has dams of a permanent nature. Diversions are made usually by temporary dams of bamboo and rock from 0.5 meter to 3 meters high. These are crudely constructed, and are either completely destroyed each year or require considerable repairing. Some of the 27 ditches in these towns have no headgate nor wasteway provisions, and as a consequence their channels have been cut so deep as to leave portions of the lands they once watered above water. The most ambitious irrigation work to be seen in this part of the province is the heading of an old canal which was destroyed about a generation ago. It had a

[1] I am indebted to the courtesy of the Bureau of Public Works for the data on the extent of irrigation in Ilocos Norte which appear in this article.

is drawn from the Bacarra or Bubuisan River. This stream rises in the northeastern part of the municipality of Bintar, and runs its entire course to the China Sea through this municipality and that of Bacarra. From its source to the latter town, the stream is made up of a series of rapids, a circumstance which makes it easy to divert water for irrigation purposes. The stream carries a fair amount of water even in the dry season. According to a gauging made in April, 1909—that is, during a dry month—below the town of Bacarra and below all points where water was diverted there was a discharge of 3,300 second liters going to waste.

There are 8 canals which divert water from the Bacarra River, covering from 200 to 1,800 hectares each, and some 35 small ditches, watering from 2 to 70 hectares each. All of these ditches, it is said by the people of the towns, have been built by the landowners and are maintained by them. The larger ditches have been well constructed, and show fairly good maintenance. Diversions are made by temporary dams of bamboo and rock, which are either destroyed or require considerable repairing each year. Rows of stakes are driven into the bed of the stream, and the spaces between are filled with stones and brush. Permanent headgates and wasteways above the high-water mark have been provided on a number of the larger ditches, reducing repair work on the ditches. Important structures employed on the canals such as checks, drops, and culverts are of a permanent nature, and are usually constructed of cobblestones laid in lime mortar.

It would be beyond the scope of this article, which aims only to convey a general idea of the degree of development of native irrigation in Ilocos Norte, to give a detailed description of all the irrigation works in Bacarra and Bintar. In order to illustrate the utmost that has been done in this region, I shall give a few facts regarding the two most ambitious works, the Paratong and the Kamungao canals.

The former is the largest and most important canal in the province. Heading just above the town of Bacarra, it extends across this municipality and waters about 500 hectares in the municipality of Pasuquin, besides nearly 850 hectares in Bacarra. The main canal and the Bacarra and Pasuquin laterals are about 20 kilometers long. It is claimed, and I know of no evidence to the contrary, that this canal was built by the landowners without the assistance of any regular engineer. Many repairs are necessary each year, and these are made by the landowners benefited by the system. At one place, where the Pasuquin

lateral heads, the water of the canal is carried across the Bangsirit estero in flumes. The Paratong canal has a capacity of 3,000 second liters.

The Kamungao canal is about 6 kilometers long, and serves over 800 hectares. It heads opposite the town of Bacarra, and crosses the divide between the valley in which that town is situated and Laoag, about 500 hectares of the land it serves being situated in the latter municipality. The system is well constructed, and is provided with masonry headgates and wasteway. But conditions at the heading are such as to give rise to some complaints from landowners on the Laoag side of the shortage of water. The heading of the canal is at a bend in the river; there is no diversion dam, and the channel is so high that an inadequate supply of water is diverted.

The Bisaya ditch which irrigates certain lands in Bintar is of interest as showing what the natives are capable of doing, because for the greater part of its course of 3 kilometers down the cañon of the Bacarra River the waterway is formed by a masonry wall at the foot of the rock cliffs.

All the irrigation done in this province depends on gravity. No pumps, water wheels, or other mechanical devices are in use.

It is of interest to know how the foregoing works and others similar to them have been built and are maintained. No very large landed estates are found in this province.[2] Even the few landholdings of comparatively large extent are almost invariably divided into several parcels separated from each other. Hence, it is but seldom that any one man finds it to his interest to build irrigation works of any considerable size for the use of his land. Therefore, the necessary feed canals and other works for bringing water from the rivers to the land must be built by coöperation if they are to be built at all. This state of things has given rise to a large number of irrigation societies. These are of interest to a student of the Ilocano people for two reasons; namely, their importance to the agriculture of the region and their indication of the capacity of the people for coöperative effort.

These societies of the Ilocano people are a marked characteristic of the Province of Ilocos Norte. In the Ilocano Provinces of Ilocos Sur and La Union, not very much irrigation from rivers and springs is practiced. Of the irrigation situation among

[2] According to the Philippine census of 1903, the average size of farms and other parcels of land under cultivation in Ilocos Norte is only 0.622 hectare. This is one of the lowest averages to be found in the Philippine provinces.

the Ilocano element of the population of Pangasinan, Zambales, and Nueva Ecija, I am ignorant. In Cagayan Province, certain Ilocano towns—for example, Claveria and Sanchez Mira—have irrigation works of considerable extent. Claveria is said to have more than 2,000 hectares of rice land under irrigation. I suspect that these works have been built and maintained in the same way as those in Ilocos Norte; that is, by popular coöperative societies. But the total extent of irrigation works built and maintained by Ilocanos in this province does not reach that of the works existing in Ilocos Norte. In the latter province, I have enjoyed good opportunities of observing the working of a number of irrigation societies, and some details about them may be of interest.

There are irrigation societies in all the municipalities of this province, but owing to the local conditions these societies play the most important rôle in the northern half of the province and are of special importance in Pasuquin, Bacarra, Bintar, and Piddig.

The members of each society are bound together by a written agreement which prescribes the organization of the body and the field of its operations, defines the duties of its members, and provides penalties for disobedience which range from a small fine to expulsion from the society and confiscation of a member's share in the land irrigated. I have read a number of these agreements as enforced in Bangi, Bintar, and Badoc. There seems to be no standard or pattern for these documents, for they differ widely one from the other. They range in precision and formality from agreements drawn up by lawyers and composed of scores of paragraphs down to a simple statement that "the undersigned agree to undertake the irrigation of such-and-such a piece of land under the leadership of So-and-so." The majority of agreements occupy a middle ground between elaborate precision and sketchy simplicity. They have been drawn up in most cases by men who have local influence, but no legal training. Some of them at least were drawn up with a view to taking up and irrigating a piece of public land; it is not easy otherwise to understand the provision for confiscation of the holding of a member who does not fulfill his obligations. This provision occurs in the following instrument organizing an irrigation society in an outlying settlement of Bintar. The agreement is given here because it is fairly typical of many.

We, who sign our names or make a cross below, agree to make a canal to bring water to the place called Gimamaga. There is no one compelling or

coercing us; we are expressing our spontaneous desires, and we say the following:

First.—We all equally agree to choose a chief[3] to give us orders, to the end that there may be order in our work on the said canal.

Second.—We also agree to choose foremen and designate them as assistants to the said superintendent of construction.

Third.—We agree further that on being given an order by the said chiefs we will not make objections, but will all equally obey the order, and he who disobeys this provision of our agreement shall be given two lashes to punish him for his disobedience, and if he is guilty a second time we will confiscate his share of the property to punish him for his disobedience.

Fourth.—We agree further that when a day fixed upon for our work arrives and our superintendent sounds his horn to call us, we will hasten to present ourselves and will not wait for a third or fourth blowing of the horn, and that that one of us who shall be the last to arrive shall be fined six *cuartos*[4] as a punishment for his lateness, unless he has a reason.

Fifth.—We agree further that when the work on the said canal is begun no one of us may go away or hide; and he who shall be caught hiding shall be given five lashes to punish him for his disobedience, and his explanations shall not be listened to.

Sixth.—We agree further that after the month of July arrives it shall not be permitted to furnish a woman or a child as a substitute, especially if our work consist in building dams, and he who contravenes this agreement of ours shall be liable to a fine of an eighth of a peso, and his explanations shall not be listened to.

Seventh.—As soon as our shares of work shall be allotted, whether the work consist in canal digging or fencing, we will make haste to perform the work, without waiting for the assistance of the whole society; and he who disregards this provision of our agreement shall be fined an eighth of a peso for his disobedience.

Eighth.—We agree also that the obligation of furnishing labor or materials, whether for excavation or for fencing, shall be equally distributed among us.

Ninth.—We agree further that the cost of fenced ways for the passage of animals, such as, horses, buffaloes, oxen, and pigs, shall be equally distributed, and no one shall fail to conform to this rule.

Tenth.—We agree further that we shall be free to invite outsiders to work with us for half a day or a day,[5] but the superintendent shall not have authority to make contracts without first submitting the matter to us at a meeting.

[3] Literally, a man to serve as our father.

[4] About 4 centavos in Philippine currency or 2 cents in United States currency.

[5] In Ilocos Norte it is not unusual for country people to assist a neighbor or relative for a short time without money payment, but on the understanding that they are to be given food and drink. If the work lasts only about half a day, a few drinks of *basi* are considered sufficient compensation; if the work lasts longer, it is incumbent on the man who has invited the workers to regale them with unusually good food, including a meat or fish element, as well as drink. It is in this way that houses are often built and ditches dug without the expenditure of any cash.

Eleventh.—Those who work against our agreement to exploit lands in common shall receive five lashes from us for the first offense, and shall be deprived of their rights for the second, as a punishment for their evil custom, and we will not listen to their explanations.

Twelfth.—We shall have no right to disobey the orders of our superintendent, when he assigns us work, whether the work consist of digging or fencing, and he who acts contrary to this agreement shall be punished as is set down in article seven for his first offense, and for the second he shall be deprived of his share of land as a punishment for his disobedience.

Thirteenth.—It shall not be allowable to call us unexpectedly to a place distant from these fields. If it is desired to call us to a distant place, we must not be called unexpectedly but must be advised in advance.

Fourteenth.—We shall all leave our implements (*i. e.*, in the places where work is being done), whether plow or harnessing rope or harrow, and none but the owners shall take the said implements, and he whom we may catch in the act of taking articles belonging to another person shall, for the first offense, be condemned by us to suffer a suitable penalty, and for the second offense he shall have his share in these fields confiscated as punishment for his disobedience, and no explanations shall be listened to.

All the above clauses of our most true agreement and convention for cultivating the soil in common shall be strictly obeyed; no one is coercing us nor causing us to be coerced, but of our own free will we make this agreement in order to have discipline in our work, and in testimony of our adhesion to this, our agreement and convention, those of us who know how to write sign their names, and those who do not know how to write make their mark and have their names written for them, now in the year eighteen hundred ninety-four.

Dimamaga, *sitio* of Bintar, September 15, 1894.

[Twenty crosses (marks) and three signatures follow.]

There is a supplementary paragraph, dated March 24, 1911, in which it is agreed to choose a new superintendent and to substitute certain names for others.

In this case, the *cabecilla*, or chief, is also the *maestro*, or superintendent of construction. But it is not at all uncommon to find the office of chief of the organization and that of the superintendent of construction divided. Most societies also have a special officer known as the *papelista*,[6] because he keeps the papers; that is, the accounts. His duties are those of a secretary-treasurer. It is his duty, besides keeping the society's funds, to keep account of the fines incurred by the members. Small societies—I have seen the membership list of one which comprised only about half a dozen names—may do without any officers except a chief (cabecilla). On the other hand, a large society may have in addition to all the above officers two or three members who may be called a commissariat. These men, instead of working on the canals and structures of the irrigation scheme,

[6] A Spanish word meaning one who has to do with papers.

fish and cook for their fellow members while the latter are at their labor.

Nominally the officers are elected, and may be deposed by vote at any time. In other words, they are subject to the recall. But as a rule, a society has one or more members whose influence is preponderating because of property, shrewdness, education, or past or present government office, who constitute the real controlling force. It must be borne in mind that a very large proportion of the members cannot even read or write. This fact is sufficiently evidenced by the long rows of marks seen at the end of the agreements. The ignorance and humble station in life of the mass of the members make it easy for a local boss who gets to be the chief of an irrigation society to keep control of its activities.

In the case of those societies whose constitutions I have read, the land irrigated is divided into equal shares among the majority of the members, with the stipulation, in the case of many of the larger societies, of larger shares for one or more of the officers. The chief is often thus favored, sometimes to the extent of having twice as much allotted to him as the ordinary members; the superintendent of construction and the secretary-treasurer are also given an advantage sometimes; the foremen have no advantage except that they do not do as much manual labor as the ordinary members.

Landowners who do not belong to a given society frequently want the association to bring water to their land, or wish to enjoy water rights in some canal that passes their land, but which they have not helped to build. In such cases, it is often possible for them to secure the advantages desired by agreeing to give the members of the society a part of the crop. The payment demanded is usually high, amounting often to two-fifths of the crop.

The danger of the chief of an irrigation society enriching himself at the expense of the labor of the members is realized by the Ilocanos, and the article found in the agreement quoted above, forbidding the chief to enter into irrigation contracts without first submitting the proposition to a meeting of the society, is a very common one in instruments of this kind.

Another common provision is one expressly forbidding a member to alienate his share of land without the consent of the society. It is often provided that in case a member wishes to sell he must give the first choice to a fellow-member. On the death of a member, his rights and obligations in a society descend to his heirs.

A provision sometimes seen in the constitutions of irrigation societies in Ilocos Norte is that disputes arising from the work or the shares must be submitted for adjustment to a meeting of the society, recourse to the courts being punished by expulsion.

Money for the purchase of building material, such as timber or lime, is raised by a levy on all the members, or the material may be furnished by members in lieu of work.

An omission which strikes one forcibly in reading the agreements is the lack of any definite provision for dividing the water supplies. This omission corresponds to one seen in the irrigation works; namely, the almost, though not quite, universal lack of any system by which a definite amount of water can be drawn from the main canals to the small ditches of the individual fields. It seems to be assumed that there will be water enough for all. If there is any system to insure rotation and equality of supply, I am not aware of it. Doubtless, the question of a square deal in this matter comes up and is acted upon in meetings of the society.

These meetings take place in some societies at regular intervals. In others, they are called from time to time by the chief.

As may be supposed, something is required to hold slack members of the society to their work. For this reason, in most agreements a definite fine is levied for each day's absence from work when a call has been issued by the head of the society. This fine is expressed in the agreements in terms of money, but in fact is collected in kind at harvest time. It is the principal duty of the secretary-treasurer to keep a record of the number of day's absence of each man and to collect the corresponding amount of fines. These go into the common fund, which is mainly expended for food and drink for the members.

There is a good deal of difference between societies in the degree of strictness with which the payment of fines is enforced. Some societies are evidently very slack in this regard; in others, there is a businesslike strictness.

I have heard of one or two cases of embezzlement on the part of the treasurers, but the circumstances of the collection of fines, namely, that it takes place under the eyes of so many members of the society and that the fines are collected not in money but in the form of bundles of rice, easily noted in amount and rather difficult to get rid of secretly, serve as deterrents to breach of trust.

Besides the ordinary irrigation societies composed of land-

owners, I know of at least one society in Ilocos Norte organized to do irrigation work for hire. The society comprises about thirty men, who are said to own little or no land themselves, but who hire themselves out to propietors in return for a share of the crop. I have been informed that this society conducts the irrigation work for land that produces about 5,625 hectoliters of unhusked rice. The collection is effected at harvest time by the secretary-treasurer of the society. These men have a recognized chief (cabecilla) at the head of their affairs. I do not know what advantage in compensation, if any, is enjoyed by the officers of this society.

It must not be supposed that the members of this society make their entire livelihood by doing irrigation work. That work, as conducted in Ilocos Norte, lasts only a few months of the year, sometimes only a few weeks. During the rest of the year the members are free to work at anything they can. In irrigation work, as in other matters, it is unusual in Ilocos Norte to see specialization.

All the irrigation societies with which I am acquainted hold an annual feast at which they enjoy all the rice, meat, and fermented sugar-cane juice that they can hold. The means to do this come from the fines levied on sluggards; often they are eked out by the results of the chase. From twenty to forty men with nets and dogs can usually get a deer or two or a wild pig in Ilocos Norte, and a few men are commonly told off beforehand to catch fish. The drink—basi—can be easily obtained in exchange for rice. In case means are still lacking, the chief levies a contribution of a few centavos on each member.

Most irrigation societies are placed under the patronage of some particular saint, such as San Isidro Labrador (Saint Isidore, the Ploughman or Farmer). But as the most opportune time for holding the feast is at the conclusion of harvest, it is not necessarily held on the day assigned to the patron saint in the calendar.

A feast is preceded by religious ceremonies. Money is paid to a priest by the society to celebrate mass on the preceding Sunday. If all or most of the members are adherents of the Aglipayan organization (the Independent Filipino Church), the money goes to the local representative of that body. I have known of cases where the members have been divided in their allegiance and money has been paid for a mass to the local Roman Catholic priest and also to the local head of the Aglipayan society. The mass, I was always informed, is applicable to

the souls of the deceased members of the society and all those persons from whom the members of the society may have inherited their land.

But besides this and other Christian ceremonies, it is the rule among the societies with which I am acquainted to perform other rites which are not due to the teaching of the Christian Church. One of these is performed at the annual feast just mentioned. It consists of setting forth food and drink for spirits, having in mind not only the ancestors of the members, but spirits in general. I have been present several times at the annual feast of irrigation societies, and once had the good fortune to arrive at the scene early enough to see the offering set out for the spirits and to hear the invitation extended to them. The offering in this case consisted of plates of rice, of two kinds, one of which was the sticky sort called *díket*. There were also dishes of rice cooked with coconut milk (not coconut water) and a little basi. These articles were set out on the floor of a room in the evening and left untouched until early morning. After everything was placed in order, a woman went to each window of the room and invited the spirits in turn in the words which I found to be, in Ilocos Norte, the commonest formula of invitation to them, couched in such general terms as to include not merely ancestors, but any other spirits that might wish to come. These were the words:

> Come now, come now, sirs, come, come all, all, let the lame have themselves carried, let the blind be led.[1]

After this, the room was left empty till morning, when the feast began.

This offering of food and drink to spirits at the annual feast is in line with the practice of irrigation societies at other times. An important ditch or canal is seldom opened without certain preliminary ceremonies of a propitiatory nature. Those related below show the practice in the northern two-thirds of the province of Ilocos Norte, where I saw more land being irrigated from streams than in any other part of the Ilocano provinces. Minor details may differ in various towns, but on the whole I found an unexpected degree of uniformity.

When a society has been formed for the purpose of digging a canal and bringing a piece of land under irrigation, a cross about a meter high is planted where the canal is to be opened. Some basi is sprinkled on the ground. Now ensues a wait,

[1] *Umaikayon Appo, umaikayon, umaikai amin amin, dagiti pilai obbaenyo, dagiti bulsek kibinenyo.*

which may extend from only one night to several days, to see whether or not any unfavorable omen appears to any of the members of the society, or a *sangkabagi* or other spirit appears to warn against the proposed undertaking. If an unfavorable omen or vision occurs, the place where it is proposed to start the canal is abandoned; unless the spirit, if there is one in the place, can be appeased by an offering. If a spirit warns against beginning the work, an attempt is made to learn what sort of propitiation it wants. In case a sacrifice is requested, a chicken, for example, the society must learn whether the animal is to be set free at the spot or is to be killed and cooked. In a society with numerous members there is usually at least one who is supposed to know more about spirits, omens, etc. than the other members, and his observations and advice are acted on. Various unfavorable omens are watched for, perhaps the commonest being the falling down or removal of the cross. If nothing occurs during the wait to contraindicate the digging of the ditch, the work is begun, offerings being first put on the platform or altar. These offerings ordinarily consist of rice cooked with coconut, chicken, betel-nut for chewing, tobacco, and basi. When the canal has been made, another ceremony is commonly performed, especially if some difficulty is met with in getting the water to run in the ditch. This rite consists in killing an animal at the edge of the canal and saying the words given below. The animal is usually a pig, but I know of cases in which an ox has been sacrificed. The animal is killed in such a position that the blood spurts into the ditch, while the master of ceremonies recites the following:

Ditch, this blood is spurted into you in order that your current may be as strong as the current of this blood.[8]

The body of the animal is then dragged along the bed of the canal up to the land to be irrigated.

It is also a very common practice to sprinkle the route of the canal with blood before starting to dig. The throat of a pig or chicken is cut, and the animal is dragged along the line of route for this purpose.

I know of an authentic case which occurred near Laoag, Ilocos Norte, where a dog's blood was used for sprinkling a piece of ground which was to be leveled to make a rice field, the dog being eaten afterward. But in this case the workers were not Ilocanos but Tingians working for an Ilocano. Whether

[8] *Kali naisuyat kenka daitoi á dara tapno iti peggesna ñga agwayawai padaen kuma ti danummo iti pigsana ñga agayus.*

Ilocano peasants sprinkle blood on the ground before leveling or clearing ground I do not know positively, but such action would be in line with their practice in canal digging.

I have heard frequently of Ilocanos burying an animal in the masonry of the canal intakes or gates, but I am not able to vouch for the existence of the practice except in one case in which my information seemed thoroughly reliable. In this case the man who had performed the act was an Ilocano living in San Miguel. He informed me that he had buried a chicken alive in the masonry on first constructing it, but on the gate or intake being destroyed by a flood he had consulted a Tingian as to what he should do. The Tingian recommended that a dog should be buried alive when the gate was reconstructed. This was done, and according to my informant the gate has stood solidly ever since.

Before taking leave of the subject of irrigation in Ilocos Norte, I wish to mention certain unsatisfactory features. One is the danger of a local boss who initiates a canal-building society or gets control of one already formed claiming the proprietorship of the works. This is especially liable to be the case after the lapse of time has eliminated the original constructors. There are several factors which may favor his success in such an attempt. As the chief, he controls the original of the document organizing the society. It is not difficult to cause this paper to disappear in a plausible manner; for example, during one of the typhoons or fires which frequently destroy the flimsy houses of a provincial town. The frequency of destructive fires in the towns of Ilocos Norte during the time covered by the memory of men still living is very striking. Even if the documents were kept at the town hall, the danger would be but little lessened. It would seem that papers of such importance should be kept in the provincial building at the capital, certified copies being furnished to the chiefs of the various societies.

A point in which improvement is possible lies in the direction of definite provision for an equitable distribution of water. It may be that there are irrigation agreements in Ilocos Norte in which such provision is made. I can only say that I have seen none in the various agreements that I have read, which were chosen at random in different sections of the province. It seems to have been assumed by those who signed these papers that the proposed works would supply sufficient water to all concerned under any circumstances. In point of fact, it happens with great frequency that there is not water enough

to go around under the present haphazard way of distributing it.

It is probable in the extreme that there are also considerable possibilities of improvement in some cases in the line of coördination of the work of the various irrigation societies operating in a given region. The societies have been organized independently of each other at different times to meet the problems of groups of cultivators who have had an eye solely to their own needs. The consequence has been that some effort has been expended and some work accomplished which might have been either avoided altogether or made to pay greater returns by coördination of effort with other groups. It is, however, a merely academic wish to desire such coördination at the present time. No substantial improvement in this direction should be expected as long as the irrigation societies carry on their activities without supervision by the Insular Government.

Finally, in cases where the Government takes action, such, for example, as taking over existing systems of irrigation during the process of creating new systems, it is necessary to exercise great vigilance to protect the interests of the small peasant. It is easily conceivable that in such cases a few influential men might claim exclusive right to compensatory water rights granted by the Government which ought in justice to be divided among a large number of persons who helped to build the old systems under a coöperative plan or whose ascendants did so. The importance, in this connection, of a scrutiny of the original papers organizing the local irrigation societies is self-evident.

ILLUSTRATION

PLATE I. Feed canal in the cañon of the Bacarra River. (Photograph by Cortes.)

PLATE I. FEED CANAL IN THE CAÑON OF THE BACARRA RIVER.

NOTES ON THE POTTERY INDUSTRY IN SAN NICOLAS, ILOCOS NORTE

By Emerson B. Christie

(*From the Museum, Bureau of Science, Manila, P. I.*)

Three plates

Pottery of some sort is in use in every household in the Province of Ilocos Norte. The principal objects are cooking pots, which are also used for carrying and storing water; tobacco pipes; hearths or stoves; extra large jars for molasses or *basi* (a fermented drink made from sugar cane); various sorts of bowls; linings for wells; and bricks. Pots, jars, pipes, and stoves are in practically universal use. Thus, although the money value of pottery used in any one house is small, the sum total for the province amounts to a considerable investment.

Part of this money goes out of the province. The large jars mentioned are not, as far as I know, made in Ilocos Norte. Some come from Manila and a good many from Vigan, Ilocos Sur, as containers of molasses or unrefined sugar. There are in Vigan a number of Chinese who manufacture these large jars.

The manufacture of bricks and pipes in Ilocos Norte is diffused among several towns. Laoag, the capital, and San Nicolas make bricks; Piddig and San Nicolas make pipes. But the manufacture of by far the largest class of earthenware used in the province, namely, cooking pots, is almost entirely confined to San Nicolas. I venture to say that if statistics on the subject were available they would show that four-fifths of all the pottery made in Ilocos Norte, as reckoned in money value, is produced in this town.

San Nicolas is a town of some eleven thousand inhabitants, situated almost directly across the river from Laoag. Its lands, as at present cultivated, do not suffice for the inhabitants, and several hundred persons derive their means of subsistence in whole or in part from the manufacture of pottery vessels, especially those for cooking and for holding water.

Bricks are made to a limited extent, mostly for local use. Those I saw were poorly molded, and seemed to be poorly baked

as well. The manufacture of bricks constitutes an industry of scarcely any importance.

Linings for wells are made mostly by men, owing probably to the fact that they are comparatively large pieces and require some strength to manipulate. They are frequently made to order, in which case their size, of course, depends on the diameter of the wells for which they are intended. They are not cast in molds, but are built up by hand in the open air by adding one layer of wet clay to another. They are then left to dry in the sun, after which they are covered, out of doors, with rice straw and other combustibles which are fired. Before the firing, they are commonly smeared with a mixture of red earth and water which gives them a uniform bright red color. These linings are usually about 30 centimeters in height. They are superimposed one upon another in wells, the top one projecting above the well mouth and serving to keep dirt from falling in.

For making pipes and cigar holders, clay is dug, dried, pulverized, and sifted. The clay is then mixed with considerable water, and is left to stand. After a good deal of sediment has settled at the bottom, the water is drawn off and left to stand in another vessel. The sediment which sinks to the bottom of this second vessel is necessarily the finer part of the original clay.

The tools used in making pipes and cigar holders consist of a knife, a few small pieces of bamboo, and one or two slender metal rods (Plate III, fig. 2). The worker, who in almost all cases is a woman, keeps a small dish of oil at hand in which to dip her fingers or her tools from time to time, to prevent them from sticking to the clay. In default of oil, she may use perspiration from her forehead or nose. After the clay has been well kneaded, the object is shaped with the fingers, then trimmed off with the knife. The bowl of the pipe is then cut out with the oblique cutting edge of one of the bamboo instruments. A thrust or two with one of the metal rods makes the opening for the smoke to pass through. After this, the pipes or cigar holders are left to dry for a time. Then they are placed in an earthenware bowl filled with combustibles, usually consisting of rice straw. The straw is set on fire and bakes the objects.

San Nicolas pipes and cigar holders are usually plain. A little ornamentation is sometimes produced by incising the unbaked clay with the edge of a piece of bamboo. Many of them are blackened by being covered, while still very hot, with rice

bran. The bran is imperfectly consumed, and leaves a black deposit on the clay.

Undoubtedly the principal clay product manufactured in San Nicolas is cooking pots. Thousands of them are made every year. The clay is dug from open pits on the outskirts of the town, dried, beaten into dust, and sifted. It is then moistened and kneaded. Some sand from the river is mixed with the clay to prevent cracking. Then the woman shapes the mixture into the form of a short thick cylinder and lays it on a round board. This board is laid on another board, but it is not connected with it by a bearing pin. From time to time she gives the upper board a turn with one hand while she works the clay with the other. Thus she gets some of the effect of a wheel. She has a dish of water at hand, and frequently dips her fingers and her tools into it to prevent sticking. At first she uses only her fingers to shape the vessel; later she uses a smooth stone which she holds against the inner surface of the vessel with her left hand while working on the outside with a paddle in her other hand. Her tools consist of a stone, a shell, and paddles of various shapes and sizes. With the paddles she beats the outside of the vessel, causing it to spread. When the vessel is fairly well shaped, she lays it aside for a time to set and partially to dry. After this, she starts working with it again, giving the last touches. When the vessel is completely formed, she smooths the outside with a shell. Then she may give it a few strokes with an incised paddle to impress on it a simple pattern. It is common for the worker to smear the outside of the vessel with red earth mixed with water, in order to give it a uniform red color. If she does not do this, the clay, which is grayish brown before being fired, turns a poor and irregular red color on being burned. As in the case of pipes, it is often desired to give the pot a black color. This effect is secured in the same way as with pipes.

A few hearths or stoves and bowls of various sizes and shapes are also made. The bowls are made in the same way as the cooking pots. The hearths or stoves are built up in layers in the open air, and are then covered with straw and other combustibles and burned.

Pottery making in San Nicolas is strictly a household industry. To a large extent it takes the place in the family economic system which weaving by hand occupies in most other towns of the province. A woman working steadily at making pottery may earn from 25 to 30 centavos (12.5 to 15 cents United

State currency) a day, but in fact the work is taken up and dropped according to the family convenience or needs and according to the state of the weather. As all cooking pots are burned out of doors, without shelter of any kind, the work is interrupted by rainy weather.

Just as the manufacture of pottery is strictly a household industry, so the distribution is usually a family affair. It is true that some one occasionally buys a cargo of pottery from the manufacturers in San Nicolas and takes it up or down the coast in a sailboat. But speaking broadly, each family that makes pottery sells it to the ultimate consumer. This part of the work is also in the main the women's affair. There are several towns within a few kilometers of San Nicolas. Nearly every morning, if the weather is favorable, San Nicolas women may be seen starting for the markets of these towns, carrying on their heads large trays loaded with earthenware, which ordinarily consists of cooking pots. The pots are kept from falling off by a network of cords. The price at which the women retail the pots at the markets varies from 1 to 5 centavos according to size. It often takes a whole day to dispose of 50 centavos' worth of pots.

When the desired market is at a considerable distance from San Nicolas, the men of the family often take charge of the distribution. They do not use ox carts much for freighting earthenware because of the danger of breakage, but sling the vessels on the end of the carrying pole (*piñgga*) borne on one shoulder. If the load is too heavy for one man, it is slung from the middle of the pole and two men take each one end of the pole on a shoulder. At harvest time, which is, of course, the best season for sales, San Nicolas men may frequently be seen carrying their wares even in remote barrios of the province. Sales at this time of the year frequently take the form of barter, the purchaser of earthenware paying in unhusked rice. At this time of the year, also, a considerable number of people from all parts of the province go to San Nicolas to trade their rice for pottery.

It is impossible to state accurately the value of the annual production of San Nicolas pottery. Taking into account the fact that this town practically supplies the whole Province of Ilocos Norte, and even sends some wares to Cagayan, I think that it amounts to a business of not less than 10,000 pesos a year, and probably reaches from 40 to 50 per cent higher.

ILLUSTRATIONS

(Photographs by Cortes.)

PLATE I

FIG. 1. Potters kneading clay.
2. Women shaping pottery.

PLATE II

FIG. 1. Interior of potter's house.
2. Woman burning pottery.

PLATE III

FIG. 1. Peddler of pottery.
2. Woman making pipes. The deep bowl on her left is for burning the pipes.

Fig. 1. Potters kneading clay.

Fig. 2. Women shaping pottery.

PLATE I.

Fig. 1. Interior of potter's house.

Fig. 2. Woman burning pottery.

PLATE II.

Fig. 1. Peddler of pottery.

Fig. 2. Woman making pipes. The deep bowl on her left is for burning the pipes.

PLATE III.

HISTORY OF THE SPANISH NORMAL SCHOOL FOR MEN TEACHERS IN MANILA, 1865–1905 *

By Andrew W. Cain
(*From the Bureau of Education, Manila, P. I.*)

Four plates

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*A thesis written to satisfy, in part, the requirements for the degree of master of arts in the University of the Philippines.

INTRODUCTION

This study was undertaken for the purpose of determining the extent to which the Spanish Government in the Philippine Islands provided for the professional training of its public-school teachers. It will be noted that prior to the promulgation of the royal decrees of 1863 there was nothing in the Philippines that could be termed public education. Previous royal orders regarding education had been issued from time to time, but as no provisions were made for putting these orders into effect they all came to naught.

When educational reform was finally inaugurated in 1863, and thereafter, the work was carried on largely through the Jesuits. The Jesuits have a well-established reputation as a teaching order. After an exile of nearly a century, they were permitted to return to the Philippines in 1852 upon the conditions that their missionary fields be limited and that they devote a part of their time to the spread of education. The Jesuits gave Spain that assistance which made possible the founding of a system of public education in the Philippines. The normal school was to be at the head of this proposed system of instruction. When the plan for the establishment of the normal school was finally completed, the school was given over to the Jesuits to be administered as they thought proper. The part of the Government in the undertaking was merely to pay the expenses.

This article is based largely upon original documents which heretofore have not been published or translated into English. Lack of space forbids my mentioning the names of many to whom I am under obligations for assistance. Especial thanks are due Father Marcial Sola, prefect of studies in the Ateneo de Manila, for placing at my disposal the archives of the Ateneo; Father Miguel Marti, secretary of the Central Seminary of St. Xavier, for courtesies extended in allowing me to examine the registers and libraries of that institution; and finally to Mr. Alexander E. W. Salt, instructor in history in the University of the Philippines, for advice, helpful suggestions, and assistance rendered throughout the preparation of this paper.

PRELIMINARY PLANS

On February 7, 1855, Don Manuel Crespo y Cebrian, governor-general of the Philippine Islands (1854–1856), appointed a commission to draft a set of resolutions for the schools of the Philippines, in compliance with the royal order of November

3, 1839. This commission was given the following instructions for guidance in its deliberations, and empowered:

1. To draft a course of study for the schools of both sexes, paying particular attention to the teaching of the Spanish language; and to provide for uniform teaching in the schools.

2. To determine the number of men and women teachers necessary for the service of the public schools, and to estimate the amount of revenue required for their support.

3. To report upon the necessity of a normal school, the advantages to be derived therefrom, the advisability of undertaking the establishment of such a school, and to draft a plan for a school from which trained teachers suitable for teaching in the provinces might graduate.

This commission held but few meetings, and accomplished but little during the first five years of its existence. Governor-General Ramon Maria Solano y Llanderal (1860), moved by the tardiness of the commission, delegated an official from the office of the executive secretary to draw up a plan for reform along lines similar to those intrusted to the commission. Within two weeks, this official had completed the work assigned him, and his promptness had the effect of spurring on the commission to the completion of its task.

The principal point of debate during the sessions of the commission was the teaching of Spanish. The opposition was led by Father Francisco Gainza, vice-rector of the University of Santo Tomas, one of the most active and influential members of the commission.[1] His chief argument against the teaching of Spanish was that if there was a uniform language in the Philippines the door would be opened to Protestantism. It was also pointed out by him that Russia and Prussia were unable to force their respective languages on unhappy Poland, and their failures were held up as examples and warnings to Spain. The opponents of Spanish acted also from political considerations. They hoped that by keeping alive and in opposition the several language groups, they would isolate the many separate sources of insurrection. The commission finally voted to make Spanish obligatory.

A report was rendered in 1861, nearly six years after the appointment of the commission,[2] and two years later the Madrid officials promulgated the famous royal decrees, which were by far the most significant legislation ever produced by the

[1] See No. 24 of the bibliography.

[2] For reports of other commissions and individuals, see Nos. 10 and 32 of the bibliography.

Spanish Government for the cause of public education in the Philippines.

THE ROYAL DECREES OF 1863

The royal decrees, promulgated by Queen Isabela II on December 20, 1863, were the foundation of the system of state education in the Philippines.[3] A résumé of those decrees which relate to the Spanish Normal School for men teachers is given in this chapter, as they form the basic legislation upon which the school rested, and throw light upon its subsequent history.

In the opening article we read:

> *A normal school for primary teachers is to be established in the city of Manila, in charge of and under the direction of the fathers of the Society of Jesus.* The normal school is to serve as a seminary for religious, obedient, and trained teachers for the management of schools of primary instruction for the natives throughout the whole Archipelago.

GENERAL PLAN OF ORGANIZATION OF THE NORMAL SCHOOL

The decrees provided for a director, at least four teachers, such brother coadjutors as might be necessary, one porter, and indispensable subordinates.

The director was to be the official superior, and was to exercise authority over all the teachers, employees, and students of the school. He was to plan the education and direct the training of students, to preside at all literary ceremonies, to visit the rooms, to preserve discipline, to correct any infringement of rules, and, when necessary, to expel pupils.

Of the four or more teachers, one was to be spiritual adviser, teacher of sacred history, morals, and religion, and was to preside at all religious ceremonies. Another was to be prefect of manners, to accompany students in their walks, and to attend to the general ceremonies incident to the interior life of the institution. The remaining teachers were to handle the other subjects of the curriculum.

MEANS OF SUPPORT

The royal decrees provided that the normal school should be supported out of the central treasury of ways and means, but as the latter was subsequently suppressed the normal school was thereafter supported by a charge upon the local funds.[4]

[3] See No. 14 in the bibliography.

[4] For an estimate of the amount of money necessary for the support of the normal school, see page 150. For an account of the final withdrawal of Government support, see page 166.

THE COURSE OF STUDY

During the first four years after the opening of the normal school, the course of study was to cover a period of two years. Thereafter, the time was to be increased to three years. For the purpose of perfecting their studies, graduates were to be permitted to return to the school for a year of postgraduate work, in case this did not interfere with the work of the undergraduate students.

The decrees provided that the course of study should comprise the following subjects: Reading, writing, arithmetic, music, rules of courtesy, religion, morals, sacred history, Spanish geography and history, practical agriculture, physical and natural science, geometry, the Spanish language, and the elements of pedagogy.

The director of the normal school was to select a list of books for use in the school. Upon the approval of the superior civil government, these were to become the textbooks of pupils and were to be used as the basis of the explanations given in the schools. When necessary, these texts were to be revised in such a way as better to meet educational conditions.

In the same locality as the normal school, but separated therefrom, was to be a primary school composed of nonresident boys. This was to be under the supervision of a teacher of the normal school, and was to be used as a training school for the students. As a requisite for graduation, each student was to be required to do at least six months of practice teaching.[5]

Provision was made for a private examination at the end of each month in each of the classes of the normal school and also for an examination at the close of the first semester, covering all of the subjects studied up to that time. As a reward for deportment, application, and progress, as well as a mark of punishment for bad manners, laziness, and a lack of interest, the ratings of all pupils were to be read monthly in the presence of the students, the instructors, and the director. At the close of each year, public examinations were to be held in the presence of the government officials and other distinguished persons of the capital. At the close of the examinations, the results were to be announced and prizes were to be awarded.

WHO WERE TO BE ADMITTED AS STUDENTS

The decrees provided for regular resident students, who were to be selected from the several provinces in proportion to the

[5] For a description of the manner in which the practice school was conducted, see pages 147 to 149.

population, the total number to be determined by the superior civil government, and for a limited number of day students, who were to come from reputable families living in the capital or in neighboring provinces and to be under the immediate care of parents or guardians who would guarantee that the students would complete their course and become an honor to the institution.

The following were to be the requisite qualifications for entering the normal school. The prospective student was required: (1) To be a native of the Spanish dominions; (2) to be 16 years of age;[6] (3) to be free from contagious diseases and of sufficient health to enable him to fulfill his duties as a teacher; (4) to possess certificates of good conduct; and (5) to be able to speak the Spanish language, to know the Christian doctrine, and to be able to read and write well.

COST TO PUPILS

The regular resident pupils, who were to be selected by the council of the superior civil government, were to receive free support, medical treatment, school equipment, and tuition, but were to be required to furnish their own clothing.[7] The supernumerary resident students—that is, those students not selected by the government—were to pay 8 pesos per month for board. In 1866 this amount was raised to 10 pesos per month, in 1870 it was fixed at so much for each study pursued, and at a still later date the price was raised to 140 pesos a year.

Each student was required to provide himself with certain specified articles of clothing. The total annual cost of his clothing was reckoned at 40 pesos.

After leaving the normal school, the regular resident students were required to serve the state for a period of ten years as teachers in the public primary schools.

INTERIOR REGULATIONS

The royal decrees provided further that "special regulations shall detail minutely the organization of the normal school." [8]

[6] The minimum age limit was later reduced to thirteen.

[7] The government pensioners received an allowance of 10 pesos a month. From this amount they paid a part or all of their expenses.

[8] The most important of these regulations are given on page 151 et seq. The students' daily program of duties is given on page 136. For the details of the student's conduct in and about the building, see No. 26 of the bibliography.

The decrees set aside the following holidays for the school: Sundays, feast days, Ash Wednesday, All Saints' Day, the birthday anniversaries of the Spanish sovereigns, the day of the patron saint of the superior civil governor, twelve consecutive days beginning from Christmas eve, the three days preceding Lent and those from Holy Wednesday until Easter Sunday. The students were not to leave the institution during any of these days. It was provided that there should be a long vacation of one and one-half months during the period of greatest heat. By a later decree, the vacation period was made to include the months of April and May.

Regarding punishments, the decrees ran as follows:

> The punishments shall be public censure, deprivation of recreation and walks, banishment and separation from the other students, and if these are not sufficient the definitive punishment shall be expulsion from the school. Expulsion shall take place because of any contagious disease, for notable laziness and lack of application, for serious lack of respect to the teachers, and for bad conduct or depraved morals.

CERTIFICATES

It was provided in the decrees that students of the normal school who successfully completed all the work of the three-year course and passed the prescribed examination with a rating of "excellent" were to receive certificates showing their attainments [9] and were to be regarded as eligible to teach in the intermediate schools. Those who completed the work in like manner and passed the examination with a rating of "good" or "fair" were to receive certificates indicating their fitness to teach in the primary schools. Students who completed all of the work but failed of promotion on account of low ratings in the examination were to be offered employment as assistant teachers.

RESPONSIBILITIES AND PRIVILEGES OF GRADUATES

Regular resident students who received the benefits of the normal school were to teach in the public school for ten years at stations to which they might be assigned by the superior civil government. Those who left the school of their own accord or were taken from the school by their parents, as well as those who were expelled for lack of application or for bad conduct, were required to repay to the state the amount expended on their education.

The teachers appointed from the normal school were not to

[9] Facsimiles of certificates are given in the plates.

be discharged except for legitimate cause and by resolution of the superior civil governor, after hearing the interested party. The causes for which an action might be brought were faults of religion, public or private immorality, lack of zeal in the fulfillment of duty, and abandonment of the Spanish language in the explanations or in the ceremonies of the school.

Teachers and assistants were to be exempt from personal service as long as they discharged their duties as teachers, and even after they ceased to perform these duties, provided they had been in the teaching service for fifteen years.

After five years of service for teachers and ten years for assistants, these persons were to become *principales*.[10]

It was provided that teachers who were disabled in the discharge of their professional duties were to receive a pension, subject to certain restrictions. The same rule was to apply to those who reached the age of 60 in the teaching service. After twenty years of service, all teachers were to receive a pension equivalent to half the retiring salary. After thirty-five years' service, the pension was to be three-fourths of the retiring salary.

Teachers and assistants with certificates were to be preferred for appointment to various government positions after ten and fifteen years' service, respectively. No examination or other test of fitness was to be required.

In addition to their regular salaries, teachers were to receive quarters for themselves and their families and fees paid by wealthy pupils.

THE EQUIPMENT OF THE NORMAL SCHOOL

A list of the equipment provided for the normal school throws light upon the life of the student body, the kind of instruction given, and the size and importance of the institution. Moreover, it emphasizes the fact that the Spanish Normal School, like nearly all of the other schools of the Philippines during this period, was a combination of school, dormitory, and chapel. The following is a list of the equipment with which the school was provided on July 1, 1866:[11]

Reception hall.—Three sofas, 3 armchairs, 12 black chairs, 12 small chairs, 2 small tables, 1 image of the Virgin of the Immaculate Conception with bell, 1 picture.

[10] The important people of the town. They enjoyed social distinction, and had a limited share in the administration of the government.

[11] See No. 9 of the bibliography.

Class rooms.—Sixteen writing tables with 16 railings, 4 extra tables, 1 small revolving table, 2 tables with low benches, 2 easy-chairs for the teachers, 1 large blackboard mounted on 2 supports, 4 easels, inkwells, blotting paper, pens, ink, chalk, and sponge.

Study hall.—Five large double tables, 5 dozen American chairs, 4 lamps, maps with chains and frames, pictures, charts, and 1 wall clock.

Gymnasium and baths.—One trapeze, 2 ninepin sets, 6 large and 4 small earthen jars, and bath towels.

Chapel and sacristy.—One box for ornaments, 1 cupboard for the sacristy, 2 confessional boxes, 1 crucifix, 1 laver, 6 coverings for the altar together with 6 sets of small cloths, 1 tabernacle, 6 small brass candlesticks, 2 gilded candlesticks, 1 chalice, lamps, vinegar cruet, carpets, wax tapers, and holy-water basin.

Students' dormitories.—Fifty iron bedsteads, 50 beds, canvas, thread, rope, 60 narra screens, 18 pieces of rough dimity, 50 chests and small cupboards for the rooms, 20 pieces of coconut fiber for curtains, 45 commodes, and 17 dozen towels.

Rooms of director, fathers, and lay brothers.—Five bedsteads, 5 mosquito nets, 2 large tables, 2 small tables, 24 chairs, 7 washstands, 7 shoe boxes, 4 writing desks, 6 easy-chairs, 6 commodes, and 3 cupboards.

Dining room.—Six large tables, 2 dozen chairs, 2 couches, 12 benches, 3 cupboards, 12 dozen plates, 8 dozen pieces of a dinner service, 8 large spoons, 24 dozen serviettes, 8 dozen glasses, 8 dozen cups, 6 pepper shakers, 5 coffee sets, 20 water bottles, 5 servers, 8 soup tureens, 8 preserve dishes, and table linen and oilcloth covers.

Kitchen.—One cooking range complete for more than 100 persons, 1 heater, 17 saucepans, 1 colander, 5 baking pans, 2 stewpans, 1 funnel, 2 coppers, 4 knives, 2 cleaners, 3 ladles, 3 skimmers, 2 heaters, 12 jars, and 30 dishes.

Hospital.—One cupboard with glass doors, 1 large table with 10 drawers, 2 armchairs with stands, and 1 complete medicine chest.

Servants' room.—Eight bamboo beds, 8 pillows, 8 petates, 12 coverings, 4 small tables, 2 benches, 2 pairs of tongs, 2 zinc baskets, 2 benches, 6 clay filters, 2 large saucepans, 6 small tables, 8 baking pans, 8 frying pans, 2 coffee pots, 2 milk jugs, 2 small basins and beaters, 1 bread grater, 2 sieves, 1 lantern, 3 cupboards.

Miscellaneous equipment.—Altar, cross, chalice, eucharist set, missal, incense, bread, wine, rochets, 3 wardrobes, 2 bookcases, pictures for the corridors, 1 clock, 40 flower pots, 9 bulletin boards, 6 curtains, 14 table lamps, 4 copper candlesticks, 8 benches, brooms, and feather dusters.

The equipment was at this time valued at 6,000 Spanish pesos.

THE FOUNDING OF THE NORMAL SCHOOL, 1865

EXISTING EDUCATIONAL CONDITIONS

At the time of the founding of the normal school, primary instruction was exceedingly meager. In most schools there was no teaching except that of reading and writing, and in many not even the latter. There were very few that gave even the most elementary work in arithmetic, and fewer still that taught

the rudiments of geography and history. Religious instruction was superficial and flimsy, amounting to a mere repetition of the catechism, and there was absolutely nothing taught in the way of morals and manners.

No other state of affairs could be possible, as any one who desired to teach was permitted to do so, even if he were prompted only by the most audacious ignorance: teachers were often found who could barely read and write.[12]

To remedy this condition of affairs, the government proposed to establish a normal school, and created a board composed of some of the most respectable and competent men in Manila to study conscientiously and in detail the manner and method of instituting primary teaching. This board, after six months of careful investigation and frequent discussion, submitted a favorable report, setting forth a plan of elementary education for the natives, to be conducted under the auspices of the normal school. It was not the purpose of the board to provide a high academic education which would not be necessary for the teachers, but rather to provide an ordinary, elementary training, suitable for the class of individuals for whom it was intended, and at the same time to make the training adequate for those who might afterward enter commercial life or take higher academic work.

THE FORMAL OPENING

As we have already seen, the organization and management of the normal school was intrusted to the fathers of the Society of Jesus. Those who were to take charge of the school arrived in the Islands late in June, 1864, having embarked at Cadiz, Spain.[13]

After resting for a few days, these priests prepared for the opening of the normal school in a building located on Calle Palacio in the Walled City, Manila. The inauguration and opening exercises of the school were held on January 23, 1865, the Governor-General, Rafael de Echague of Biemingham (1862–1865), presiding. Attending this function were the members of the Superior Commission of Primary Instruction and many other noted guests, all of whom showed their pleasure at being present at the inauguration of the first normal school in the Philippine Islands.

[12] See No. 27 of the bibliography.

[13] Historia de la Escuela Normal de Manila, a ten-page MS. in the Ateneo.

On the following day, Father Francisco Xavier was appointed director of the school, the priests Jacinto Juanmarti and Pedro Lacasas were appointed teachers, Gabriel Pujol and Segismundo Berengueras taking charge of the domestic arrangements. Classes were opened, and a number of pupils were matriculated.

On December 3 of the same year, the great apostle of the Indies, San Francisco Xavier,[14] was declared patron of the school.

EARLY HISTORY OF THE NORMAL SCHOOL

The first public examinations and the distribution of prizes took place about the middle of January, 1866. These examinations were presided over and prizes were awarded by the superior commission of instruction, and were attended by persons of religious distinction.

During the second year the attendance increased to such an extent that additional teaching facilities had to be provided. The course of study was also better organized, and the pupils were required to pursue the various subjects in accordance with the regulations.

In April and May the apartments on the ground floor of the building were rearranged, in order that the practice school of primary instruction provided for in the decrees might be established. This department was maintained as a model school for the benefit of third-year students in the normal school proper. The classes in the training department were composed of pupils ranging in age from 6 to 12 years and residing in the vicinity of the school. The instruction included all the subjects of a primary education, special attention and time being given to the teaching of Spanish.

On the morning of December 3, the anniversary of the patron saint of the school, solemn mass was held in the chapel. The afternoon of the same day the hall was beautifully decorated with little colored lanterns and the pupils sought relaxation in a comedy and in a variety of games, accompanied by the orchestra.

The pupils were not without spiritual instruction and admonition. They had daily exercises and instruction in offerings, masses, spiritual lectures, and rosary, and were taught to confess and receive the sacrament once a month.

[14] The name of Father Francisco Xavier, the first director of the normal school should not be confused with that of San Francisco Xavier (1497–1552), the apostle of the Indies.

The final examinations were held and prizes distributed December 19 to 21, 1866. On this occasion, 14 pupils, who had completed two full years' work, were granted the title of teacher of primary instruction. This was the first class to graduate from the normal school.

In April, 1867, the first examinations were held in the training department, the pupils who had distinguished themselves in studies and conduct being awarded prizes consisting of books and medals.

In December of this year the general examinations for the pupils in professional courses were held, and 25 students received the title of teacher.

Early in 1868 the director and teachers formerly chosen were assigned to other duties in the mission, and Father Alejandro Zans was appointed director. Fathers Pascual Barrado, Jose Casadovale, and Santiago Buntas were appointed teachers.

The number of pupils having increased, it was found necessary to provide for 20 additional boarders.

At the end of the school year examinations were held and 27 students were granted certificates of graduation.

By the superior decree of March 22, 1869, the date for the opening of the school year was changed from January to June, for the greater convenience of pupils and teachers. During this year 127 students were registered and 29 received the title of teacher.

The year 1870 was uneventful except that the personnel of the administrative and teaching staff was increased to 8—4 priests, 2 brothers, and 2 student assistants. A class of 39 students was graduated.

In 1871 news came from Madrid of the publication of the Moret decree transferring the charge of the normal school to the secular clergy. This order was received in the Philippines with great dissatisfaction by those who had been intrusted with the work of the normal school. On the other hand, there were those who welcomed the change, as they believed it signified greater progress. Arrangements were finally made for the withdrawal of the decree before the end of the year.

As the school year drew toward a close, examinations were held in the two grades of the training department and in all classes of the normal school. The director and other government officials were well pleased with the results of the examinations,

and on April 5 prizes were awarded and diplomas issued to 39 graduates.

At the opening of the school year in June 125 new pupils were admitted and a considerable number turned away for lack of accommodations.

Two material changes in the internal regulations of the school were effected at this time. The first of these prescribed the time and manner of making confessions by both boarders and day pupils. The other pertained to the inspection of the students in the evening. A priest was placed on duty as door-keeper, and the passing in and out of the building after supper was thus regulated.

The feast of San Francisco Xavier was celebrated with especial joy. A comedy was given, two balloons were let go, and the sky was brilliantly illuminated with hundreds of rockets.

In 1872 occurred the famous Cavite revolt, but the authorities of the normal school were pleased to note that this did not have any apparent effect upon the student body.

In 1874 the superior civil government of the Philippines decreed that no petition for admission to the normal school should be sent except through a provincial governor. During the same year other decrees were issued fixing the number of resident pupils.

On June 22, 1880, a royal order of the ministry of the colonies set aside a permanent sum of money to be assigned in the budget for the maintenance of the school. It was during the same year that the building was destroyed by an earthquake. The classes were for a few days accommodated at the Ateneo, being held in hallways, corridors, and every other available space large enough for a recitation. As it was impossible to continue this arrangement for a long period and as no other house sufficiently large could be found, the mission of the company of Jesuits rented to the government for the use of the school a building which it possessed in the neighboring pueblo of Santa Ana. This was occupied by the school for a period of six years. Meanwhile, seeing that no other means were forthcoming for giving this school a suitably large building and as the house at Santa Ana was inconveniently located, the mission resolved to take under its care the enterprise of erecting and equipping a new building. This structure, situated in the district of Ermita, was the home of the normal school from 1886 until the institution finally closed its doors.

DISTRIBUTION OF GRADUATES

The following table shows the places of residence of the graduates of the normal school from 1865 to 1887.

Peninsula teachers	8	Laguna	43
Abra	4	Leyte	20
Albay	12	Manila	230
Antique	4	Mariano (Guam)	2
Basilan	1	Masbate	2
Bataan	9	Mindoro	14
Batanes	3	Misamis	9
Batangas	77	Morong	8
Bohol	20	Negros	3
Bulacan	84	Nueva Ecija	8
Cagayan	23	Nueva Vizcaya	14
Calamianes	2	Pampanga	54
Camarines	14	Pangasinan	48
Capiz	40	Romblon	7
Cavite	31	Samar	18
Cebu	23	Surigao	11
Cotabato	1	Tarlac	4
Ilocos Norte	45	Tayabas	27
Ilocos Sur	42	Union	42
Iloilo	38	Zambales	14
Infanta	1	Zamboanga	7
Isabela	9	Total	1,076

PROGRAM OF DUTIES

The distribution of the time of resident students was as follows:

a. m.	p. m.
5.00 Rise.	12.30 Lunch, recess.
5.30 Mass.	1.45 Rest.
6.00 Bath, study.	2.15 Study.
6.55 Breakfast, recess.	2.45 Recess.
7.25 Recitations.	2.55 Recitations.
10.00 Recess.	5.00 Go out from the classes.
10.10 Drawing, music.	6.00 Rosary and spiritual lecture.
11.10 Study.	6.30 Study.
	8.15 Supper, rest.
	9.00 Inspection, retiring.

OUTLINE OF SUBJECTS IN THE COURSE OF STUDY FOR ELEMENTARY TEACHERS

The following is an amplification of the principal subjects in the course of study for elementary teachers, and is also the outline upon which the competitive examinations of teachers were based.[15]

[15] For an outline of the subjects required for the degree of superior teacher, see No. 5 in the bibliography.

RELIGION AND MORALS

1. What is religion and in how many ways can it be considered? What is the natural and what is the true one?

2. Who is God and what are his principal attributes? Why do we say that God is eternal, omnipotent, immense, spiritual, wise, good, kind, and just?

3. What is man? What is the human body? What is the soul and what is the difference between the body and the soul?

4. Of what does the true religion consist? What is worship and in how many ways is it exercised? What is internal worship? Is the internal worship sufficient?

5. What is morality and how is it divided? What is duty? What are good or meritorious actions? What are bad actions?

6. What is meant by moral order and what are its properties? What are laws, natural law, divine law? Civil law?

7. What are punishments and what are rewards? What are natural rewards, positive rewards? Positive punishment?

8. What is conscience? Virtue? Vice? What is the immediate consequence of virtue and what is that of vice? Of what does happiness in this and in the other life consist?

9. What duties have men to God and what is the greatest of them all? How is a knowledge of our duty to God conceived?

10. What duties has man to himself? How should man take care of his soul and his body?

11. Is man compelled to work? What is idleness and what bad effects does it bring?

12. What is suicide? Is suicide licit? What is fame? Can we be indifferent to the acquiring of fame?

13. What duties has man to his equals? How can we contribute to the conservation of our equals?

14. What are the chief duties of children to their parents? After the parents who has the preference? To whom do we owe respect and submission?

15. What duties have the parents to their children? Duties of teachers to their pupils and of the pupils to their teachers. Mutual duties between masters and servants.

16. What is homicide? Is it licit? Do all the duties that we have to our equals require equal accomplishment?

PEDAGOGY

1. Definition and division of pedagogy. Education and its object.

2. Importance and necessity. Parts that it comprises. Its agents.

3. Difference between education and instruction. Principles of education.

4. Physical education. Importance of air, light, ventilation, clothes, and exercise in physical education.

5. Physical education in the schools. Cleanliness in the school. Other matters of sanitation that require attention.

6. The teacher as a model of cleanliness. How will he inculcate cleanliness in the children? Care of the teacher with respect to air and light in school and with respect to sick children.

7. Necessity of varying the school exercises. Care that the teacher ought to exercise in order that the chlidren may avoid undesirable places.

8. Intellectual education. Of what does it consist? What is perception and how is it developed?

9. Attention. Importance of this faculty and way of awakening it in the children. How is it sustained and how cultivated?

10. Memory. What is it? How make it strong and active?

11. What is the use of imagination? What contributes to its development and what things tend to mislead it?

12. Judgment. What is the importance of this faculty? What exercises contribute to develop it?

13. Esthetic education. Esthetic sentiments.

14. What does a moral education include? What should the teacher do in order that the children may receive a good moral education?

15. How is religious education inculcated? Fear of God. Obedience to his commandments. Means of religious education.

16. Instruction. Purpose, means, and object of teaching.

17. What are methods of teaching? Explain the most important of these.

18. Teaching of the Christian doctrine. Sacred and moral history.

19. Teaching of reading and grades that it comprises. General procedure in this subject.

20. Teaching of writing. Its object. To what is this teaching reduced? Correction of exercises.

21. Teaching arithmetic. Verbal and written exercises.

22. Teaching of Spanish language. Its object and importance. Teaching of Spanish where another language is spoken.

23. Systems of teaching; advantages and inconveniences that each offers.

24. Organizations of the schools according to the existing legislation.

25. What is discipline? Its base. Prizes and punishments. Discretion and judgment ought to be used.

SPANISH GRAMMAR

1. Definition of grammar; its division; object of each.

2. Names of the parts of speech. The noun and its various divisions.

3. The adjective and its division. Difference between the noun and the adjective and rule for distinguishing them.

4. Number of nouns. How is the plural formed from the singular. Gender and its division.

5. Declension. Use of each of the cases.

6. The pronoun, its various classes, declension, use.

7. The article, its division, declension, use, and way of distinguishing it from the pronoun in the third person.

8. The verb, its division and accidents in grammar.

9. Moods of the verbs, tenses, ways of distinguishing them and of forming them. Voice and conjugation.

10. Regular and irregular verbs, impersonal and defective. Conjugation of the most common.

11. The participle and its divisions. The way of distinguishing it from the adjective. The verb and its various classes. Adverbial moods.

12. The conjunction. Its various classes. Figures of diction.

13. Syntax and its divisions. Concord and its various classes.

14. The cases of the noun and the rules for each case.

15. The use of the transitive verb, of the preposition, and of the conjunction.

16. What is the accusative construction? The nominative? The relation of each to the verb.

17. Construction after the accusative. Construction of the verbs with the pronouns.

18. The grammatical sentence and its various classes. Of what parts is each made?

19. Syntax. Figures of speech. How many are there and of what does each consist.

20. Prosody. Prosodial accent. Syllabication, diphthongs, triphthongs, words accented on the last syllable, on the antepenult, or on the penult.

21. Rules of accents.

22. Orthography and its parts. Principles that will be used as standards of good orthography with respect to the use of the letters. Spanish alphabet and classification of the letters forming it.

23. Use of the letters b and v. Also of g, j, y, x, and h.

24. Use of i, y, and of m. Duplications of the letters. Use of the capital letters. Punctuation and its signs. Cases in which the use of the comma is common.

25. Use of the period and of the other signs used in orthography. Also of the Roman numbers.

ARITHMETIC

1. Arithmetic, number, amount, and unit.

2. Entire numbers, fractions, mixed, abstract and concrete, homogeneous and heterogeneous numbers.

3. Numeration and its division into oral and written. Base of a system of numeration, and when is it called decimal? Units of first order, of second order, etc.

4. Different orders of units in the decimal numeration.

5. Absolute and relative value of the cyphers. Modes of writing and reading entire numbers.

6. Addition, subtraction, multiplication, and division. Different names of the signs. The use of these in arithmetical operations.

7. Numbers that can be divided. Even and odd numbers. Prime numbers, numbers divisible by 2, 3, 5.

8. Decimal metric system. How is it distinguished from other systems. Models used to express the multiples and divisions of the unit and way of verifying them.

9. Unit of length, its multiples and divisors. Units of surface, their multiples and divisors and what relation each bears to the immediate higher denomination.

10. Usual unit of volume and relation it bears to its divisors. Usual unit of capacity, its multiples and divisors. Units of weight, their multiples and divisors.

11. Fractions. Numerator, denominator, proper fractions, improper fractions, way of writing them and reading them. How to reduce a mixed number to a fraction.

12. Simplification of the fractions, reduction of the same to a common denominator and way of valuing them.

13. Addition, subtraction, multiplication, and division of fractions.

14. Decimal fractions. Nomenclature of the decimal units, place they

occupy. Way of reading them and writing them. When are they called homogeneous?

15. Addition, subtraction, multiplication, and division of decimal numbers.

16. Approximation of the quotient in an inexact division. Reduction of ordinary fractions to decimal and from decimal to ordinary fractions.

17. Complex and simple numbers. Reduction of a complex number to the simple form. Reduction. Way of making this reduction in the decimal metric system. Reduction from a superior species to another and intermediate.

18. Addition, subtraction, multiplication, and division of complex numbers.

19. Powers of numbers, roots, exponents. Way of indicating a power. Names that the powers receive and how to form them.

20. Square root. Cube root. Way of indicating the extraction of roots. Way of finding the square root of an entire number, of a decimal number.

21. Ratio of numbers, ways of indicating it. Proportion and its fundamental property. Way of finding one of the means.

22. Rule of three and its division. Way of solving it. When is it simple and when is it compound?

23. Partnership. Three cases that may occur and way of solving them.

24. Rule of alligation. Mode of solving it. When is it direct and when inverse? Interest, how to solve interest when simple and when compound.

25. Drafts. Different ways of negotiating them. How to find the real value and the nominal value. Discount of a draft and how to find it.

PRINCIPLES OF GEOGRAPHY AND HISTORY OF SPAIN

1. Geography: Its divisions. Astronomical geography, heavenly bodies, fixed and errant stars or planets.

2. Primary planets. What are they? Their double movement. Satellites. Comets. Solar system and that of Copernicus.

3. The sun. Its diameter, volume, and distance from the earth. The moon. Its diameter, volume, and distance from the earth.

4. The earth, its movements. Meridians, equator, tropics, polar circles, and various zones. Horizon. Cardinal points.

5. Physical geography. Figure and dimensions of the earth. Continent, island, peninsula, coast, cape, isthmus, mountain, mountain range, desert.

6. Spring, rivulet, river, torrent, lake, sea, gulf, bay, strait, currents, tides.

7. Atmosphere and elements that constitute it. Meteors. Winds, clouds, rain, lightning, thunder.

8. Political geography. Great divisions of the earth. Races of human species. Government and its principal forms.

9. Europe, its population and location, seas that bound it, its capes, mountains, volcanoes, rivers, islands, and principal straits.

10. Political divisions of Europe. States of the north and their respective capitals.

11. States in central and southern parts of Europe and their respective capitals.

12. Spain. Its population, its boundaries, climate, capes, mountain ranges, and main rivers.

13. Territorial divisions of Spain. Capital of the monarchy. Ultramarine possessions and population.

14. Population, extension, and location of the Philippine Islands. Moun-

tain ranges, rivers, lakes, and more important straits. Territorial divisions. Location and capital of each of the provinces.

15. Asia, its population, location, straits, rivers, and principal mountains. Political divisions and capital of each one of its states.

16. Location and population of Africa. Seas that bound its coasts and large rivers. Political divisions and capital of each one of the states.

17. Location and population of America. Its mountain ranges and large rivers. Political divisions and capitals of its states.

18. To what is the name "Oceania" given? Climate of Oceania, its division, and islands that form each one of the three great divisions.

19. History of Spain. What is it and into how many periods is it divided? First occupants of Spain, Phœnicians, Greeks, and Carthaginians. Purpose that they had in entering Spain.

20. Who were the Romans? Divisions they made of Spain. Resistance of the Spaniards and their glorious deeds.

21. Barbarians of the north who settled in Spain. Kings of that period who are of greatest historical interest.

22. Arabian Spain. Who were the Arabs? Struggle of the Arabs with the Christians. Who was the illustrious Caliph who was a warrior and was feared by the Christians? Who conquered him and what memorable event took place later?

23. Progress of the small monarchy of Peloyas and his brilliant victories. Kings of greater historical importance in this period.

24. The house of Austria. Origin of this dynasty. Kings of this dynasty and their notable deeds.

25. House of Bourbon. Origin of this dynasty. Kings of this dynasty and their principal deeds.

PRINCIPLES OF GEOMETRY

1. Object of geometry, divisions of the subjects, kinds of figures.

2. Straight line, curved, broken, mixed.

3. Circumference, radius, diameter, arc, cord, secant, tangent.

4. Degrees in which the circumference can be divided and subdivisions of these.

5. Angles, right, acute, and obtuse.

6. Adjacent angles and value of both angles.

7. Perpendicular, oblique, and parallel lines.

8. Divisions of the triangle because of its sides or angles.

9. Vertex, base, and altitude of a triangle. Value of angles of a triangle.

10. What is a quadrilateral? How are quadrilaterals divided?

11. Parallelogram. In how many ways can it be placed?

12. The polygon and the different value it has according to the number of its sides.

13. The circle, ring, sector.

14. Inscribed and circumscribed polygon.

15. Way of describing a circumference or drawing any triangle or regular polygon.

16. Way of inscribing a regular hexagon in the circumference.

17. Method of finding the area of a parallelogram, triangle, square, and trapezium.

18. How is the area of a regular polygon found, of an irregular polygon, of a circle, of a circular sector?

19. The more important equivalents of the plane figures.

20. Polyhedron, intersections, dihedral and polyhedral angles. Regular and irregular polyhedrons.

21. How many and what are round bodies? How are they originated?

22. Volume of geometrical body and unit of volume.

23. Way of finding the volume of a pyramid, of a prism, and of a rectangular parallelogram.

24. How is the volume of the regular polyhedron, of the cylinder, and of the sphere found?

25. Relation between two spheres of different radii.

NATURAL SCIENCE

1. Natural science and its division into physics, chemistry, and natural history.

2. General properties of bodies.

3. Three states in which bodies can be found.

4. Movement and its different classes.

5. Anemometers and their use.

6. The barometer, its use, and the principle on which it is based.

7. The thermometer, its use, and the principle on which graduation is based.

8. Instruments for measuring humidity, on what are they based, and what are their uses? How is the electromotive force valued? How is it named when it is of high pressure?

9. Light, how it is propagated, its velocity, and time required to pass from the sun to us.

10. Reflection of the luminous rays, angles they form on falling on a polished body. Refraction of the same.

11. Microscope, eyeglass, and telescope.

12. Lenses and especial property of the convex, of the concave. Who uses the former? Who uses the latter?

13. Colors that a ray of the sun is composed of and how to decompose it.

14. Electricity. Its properties. How is it developed? Different ways of developing it.

15. The magnets, the compass, and the electromagnet and their important applications.

16. Simple and compound bodies. Metals and metaloids, properties of the former and the latter.

17. Oxygen, hydrogen, and nitrogen and their principal properties.

18. Pure water and of what it is composed. The atmospheric fluid and of what it is formed.

19. Minerals. How do they appear and into how many groups can they be divided?

20. Vegetables. How do they appear, and of what are they composed? Divisions.

21. Organs of nutrition and of reproduction of vegetables.

22. Functions of nutrition and functions of reproduction in the vegetable kingdom.

23. Animals. How do they appear and of what are they composed?

24. Nutritive functions for the preservation of the animal.

25. Four great groups into which they are divided. Subdivisions of each of them.

ELEMENTARY AGRICULTURE

1. Agriculture, its object and divisions.
2. Purposes to which the agriculturist should aspire and conditions necessary to his success.
3. Tillable soil, soil test, and means of improving the soil.
4. Climate for agriculture, its agents and composition of soil.
5. Improvements of the soil and how they are made.
6. How to prepare virgin soil for cultivation.
7. Fertilizer, its different classes and method of application.
8. Special advantages of mineral fertilizers. Plants that need chalk or ashes.
9. Agricultural instruments, their division and the object of their use.
10. Object of agricultural labor, preparatory labor, and labor for cultivation.
11. Principal organs of the plant and parts of the flower.
12. Three ways of planting. Of what do they consist?
13. How many ways are there to water and how are they varied?
14. Time of harvesting and way of preserving the fruits.
15. Among the cereals, what is the richest fruit? How is it planted and irrigated?
16. Two kinds of rice and way of cultivating and cleaning.
17. Planting of maize and cultivation of barley and buckwheat.
18. Cultivation of sugar cane and way of propagating the common bamboo.
19. How are leguminous plants cultivated in the Philippine Islands?
20. Roots and tubercles used for food and how they are multiplied.
21. Preparation of tobacco seed-beds, how the plants are transplanted, and way of harvesting.
22. Lawns. Plants that can form an artificial lawn.
23. Usefulness of animals to the farmer; work animals in the field and their general characteristics.

CONTEMPORARY COMMENT

DIFFICULTIES IN THE WAY

The early years of the normal school were not without their vicissitudes. The following were the most pronounced difficulties that confronted the school:

A lack of competent teachers.—Father Luengo says: "First of all the normal school needs a sufficient and capable staff." [16] The Jesuit fathers, who had been previously banished from the Islands, were allowed to return in 1852, upon the condition that they devote their attention to higher education and to the missionary fields of Mindanao. Great efforts were put forth to extend the Christian faith to the new charge. A zealous priest writing from Mindanao says:

> By the mercy of God, the conquest of heathen people is continuing at a tremendous rate, and I believe that, despite the lack of laborers, God is

[16] See No. 19 in the bibliography.

blessing our efforts so greatly that the day is not far distant when the company of Jesus will say to the Spanish Government: "It is finished." To-day there are many villages that we have settled with converted heathen where we once reluctantly undertook the cure of souls.[17]

This work drew away from the normal school every teacher who could possibly be spared.

A lack of suitable textbooks in Spanish.—An observer voices his complaint in these words:

Going along Calle Rosario on a holiday, we saw three book stalls which we thought would be full of pious books. On stopping to examine them, great was our surprise when at one alone we found 35 pamphlets and other books of prose and verse, all in Tagalog. Not one of the three had a single Spanish book. These books (that is, the books seen at the stalls) and certain novels, always in the local dialect, circulate through the villages after twenty years of the most complete legislation as to primary education and the diffusion of the official language.[18]

It is evident that for these and other reasons the abandonment of the normal school by the Jesuits was discussed, but it is equally certain that there was an overwhelming sentiment against such action. Father Francisco G. Martin Luengo, writing to Father Juan Ricart from Surigao under date of January 25, 1881, says:

We have seen the normal school sickening for several years for lack of members of our own order who shall do their work perfectly and freely. The question of abandonment was seriously considered at our conference in Manila in 1877. In my opinion, it would be an irreparable mistake to give up such an institution as the normal school, which is a strong and powerful arm in protecting our power in these Islands. We ought to hold it more strongly in order that it may not be torn from us, until the day comes when we can place it in good hands, faithful to religion and to the throne of Spain, zealous and able to defend our glory.

The same writer goes on to specify in detail why the normal school should neither be abandoned to its fate nor turned over to another religious order.

It would be to the great glory of God, the salvation of souls, and the prosperity of the Spanish Crown in these Islands that it should continue under our care, for through this means we shall advance the welfare of the Islands, since well-trained teachers will be as apostles in their native villages.

We shall take our share in the spread of the Spanish language, whereby new truths may be implanted in the souls of the people.

We shall secure a place on the education board of Manila, which will be a great step toward advancement in the schools and will prevent certain troubles which may harm them.

We shall obtain an influence in the villages, and we shall win the sym-

[17] Father Luengo.

[18] See the document referred to in No. 27 of bibliography.

pathy of the people. Every schoolmaster who goes out will praise the Jesuits, for which reason many persons, especially their relations, will seek confession and discuss the affairs of the soul with the fathers of the society.

If the elementary schools are conducted by the third-year pupils of the normal school, an immense good may be done. If possible, the school should be situated in the outskirts of Manila. We should have far more children, and our administration would have an open field.

Of the influence of the schoolmaster among the children in the provinces, there can be no doubt, since they will be in accord with the teaching of the fathers and the rule of the society.

Let us suppose that we transfer our school to others. Who will take charge of it? Will they be religious? It is very doubtful. It is feared that, considering the ideas of the century and the tendency which has shown itself in Manila in various movements, instead of being religious men they will be laymen, and laymen trained in Spanish normal schools, who in their ignorance have spoken and still speak to the depreciation of the bishops, the parish priests, and family life.

Let us suppose that the school falls into the hands of some other religious order. Whoever they may be, I am doubtful if the normal school would be as productive as the government and the country expect. If they belong to the religious orders well known in this country, we have sufficient reason to distrust their ideas. With regard to education and the spread of Spanish, the normal school can show results in support of our arguments. Daily experience supports my contention—every day the attitude of the graduates toward religion is evident.

If the school falls into the hands of the religious men of the orders, we should be sorry for the results of their experience, as it is always essential to have a knowledge of the nature and habits of those to be educated, especially in the Philippines. It may be expected that before securing experience they will make such serious mistakes as will bring to ruin the plan of primary instruction in these Islands, which is one of the fairest jewels in the crown of the illustrious and venerable Father Cuevas. Let us look forward to the day when we can turn our attention from our parishes to the welfare of the normal school.

CONDITIONS CONFRONTING THE GRADUATES

A contemporary writer gives an admirable summary of the situation, indulging fully in his own opinions: [19]

After three years in the normal school, the prospective teacher comes fresh from his studies to don the toga of the schoolmaster. He goes to a village where he has secured a school. His youth and his inexperience do not augur success. If the parish priest lives in isolation from municipal affairs because of his character, his manner of life, and his belief that his intervention in teaching should be confined to certain definite lines, the poor teacher has recourse only to the petty governor who has no especial qualifications. It will be truly marvelous if he attains his end, introduces order into the school and obtains anything he needs, which is everything.

In a majority of the villages the people look with absolute indifference on the youth whose age is a slight recommendation, since knowledge and authority in Malay villages are conceded only to maturity.

[19] See No. 27 of the bibliography.

New teachers who have recently left the normal school should spend two or three years on probation, helping others who should be experienced and well known for their behavior to the village and the local and provincial inspectors. After this apprenticeship, the normal-school graduate would enter upon his duties with greater care.

There ought to be established, under the presidency of the parish priest, a board or committee composed of a certain number of resident parents chosen for their possession of property and by other qualifications to take their turn in looking after the school and giving the teacher moral support.

These municipal boards should assist the young teachers at the outset; should second the watchfulness of the local inspector; and, if they did their duty, they would render very difficult, if not impossible, the common fault that, where the parish priest fails in his duty of inspection, the teacher does as he wishes, and often behaves in a manner that is both reprehensible and impossible to correct.

As for textbooks, their absence is almost unbelievable. We can look for no remedy except on the part of the government; since they must be cheap, and cheapness can only be obtained by publishing large editions by contract and by distributing them wholesale through the provinces. Without textbooks, it is foolish to hope for the diffusion of Spanish.

WAS THE PURPOSE OF THE SCHOOL ACHIEVED

On this point let us hear the testimony of the director of the normal school in a letter to the director of civil administration dated May 31, 1889:

The normal school entered upon its academic career and always kept its purpose in mind until it could boast of having given the Archipelago over 1,100 teachers and assistants. As to the quality of the professional training which they have received, the normal school has vigorously complied with the government regulations, and has lately even done more by devoting more attention than the government prescribes to certain subjects. Its methods have never been unfavorably criticised, nor have any suggestions been modified. On any occasion where the government officials have honored the school with their presence, they have expressed themselves as thoroughly satisfied with its labors on behalf of education, as happened this year when Governor-General Weyler attended the commencement exercises.

Despite all this, there is a common complaint as to poor teachers and their inability to speak Spanish. While there is much exaggeration on this subject, due to the fact that modernism is always opposed to the religious atmosphere of the normal school, it must be recognized that many of the teachers are stupid and careless, that unless their minds are continually sharpened they grow rusty as they grow old, and that private affairs usurp the place of their studies and their professions.

But there are honorable exceptions. There are model teachers who carry out in full the plan of instruction authorized by the government. And all may reach this standard by strict inspection, continuous watchfulness, and the stimulus of rewards and punishments.

There is a general reason why there are only a few good Filipino teachers, but there are also many external causes which are partly excusable. The most important one is that every year about 50 graduates leave the school.

Of these, about a quarter secure positions as teachers, some go home satisfied with the education already obtained, some look for clerical positions, some secure in a short time larger salaries with less work and responsibility than would befall them as teachers, while some go on with their studies to higher schools to secure a surveyor's or a commercial degree and thus rob the schools of the best educated teachers. These causes would cease if the pay of teachers were increased; they now receive less than other employees of much inferior education, although they have more work and greater responsibility.

Another reason why Filipino teachers are not careful in the performance of their duties is that they have little assistance. Some have no proper schoolhouses and no suitable equipment and accommodations, while others are confronted by the opposition of parents. Some spend most of their time in lowering the standards of their profession and are unable to keep up the position demanded of a teacher, until at last they possess little or nothing but the name. If then there are poor teachers, this affords no reason why the normal school should be characterized as useless.

We might make complaints on similar grounds to the effect that Spanish is little spoken. Fifty per cent of this criticism is exaggeration. Those who have spent some years in the country agree that in the last fifteen to twenty years they have noticed a remarkable increase in the number of those who speak Spanish in the provinces. To hope for universal Spanish is to disregard history and linguistics. The Basque and Catalan provinces of Spain, Alsace-Lorraine in Germany, and Roussillon in France are examples of the fact that, after a lapse of many centuries under a more advanced civilization and with more compulsion, primitive dialects have not been superseded by the official language. On this account, then, there is no charge against the normal school.

RECOLLECTIONS OF A GRADUATE

Don Mariano Padilla, who graduated from the normal school in 1888, furnishes the best description we have of the methods of teaching practiced in the training department of the normal school and in the public schools generally.[20]

The practice school, supervised by a graduate of the normal school, furnished the students an illustration of how to teach, as well as how to organize and manage a large school. Each pupil of the third year was required to attend this school two weeks before graduating. The method of teaching was also studied in the class. The pupil teachers were not only required to master the lessons and practical exercises assigned, but were also expected to be able to present and explain each subject in such a way that it could be understood by the children.

We studied four systems of teaching, which we called individual, simultaneous, mutual, and mixed. The individual system consisted in teaching pupils one by one all the lessons they studied. This system was not applicable to a large school, but for a few pupils it furnished excellent advantages as the teacher could instruct according to the capacity and intelligence of each.

[20] See No. 21 in the bibliography.

The simultaneous system consisted in dividing the school into classes or sections and teaching one after another of these. The size of sections depended upon the number of pupils in the school and the ability of the teacher to handle classes. This system was similar to that which is in operation in the public schools at the present time. The system had its advantages on account of the superior organization and supervision which it made possible, but in the time of the Spanish government the general adoption of this system was impossible on account of the scarcity of teachers. Owing to a lack of funds in the public treasury, there were seldom more than two teachers in a town, one male and the other female. As boys and girls did not attend the same schools, one teacher was compelled to give instruction in all classes and all subjects. In spite of the many advantages of this system, it was not then applicable to any considerable number of schools.

The mutual system consisted in selecting the more advanced pupils of the school and organizing them into groups of monitors, who were taught at different hours by the regular teacher. The instruction of the monitors included both subject matter and methods of teaching less advanced pupils. While the monitors taught the several sections, the teacher went about the room supervising the work of monitors, correcting errors, and keeping order in the school. In the larger schools, this was the most practical system then in vogue, but it was far from being perfect. As the teacher was often overcome with fatigue on account of his arduous duties, it was impossible for him properly to instruct the monitors.

The mixed system was a combination of the simultaneous and mutual system. The teacher divided the school into sections of 15 pupils each, grouping in the same section those pupils of equal knowledge. He then formed, from the most advanced section, two groups of monitors, called first and second monitors, whose instruction came direct from the teacher. One first monitor and one second monitor were assigned to teach each section by turns. The teacher divided his own time into three equal parts, one of which was devoted to the instruction of the first monitors, one to the second monitors, and the remainder was given to the general supervision of the school. The chief merit of this system lay in the fact that it combined direct supervision by the teacher with the aid rendered by monitors.

The training department of the normal school was organized under the mixed system. The pupils of the third year were compelled to attend this department for two weeks. Then the critic teacher in charge of the practice school submitted to the director of the normal school a report on the work of the student teacher, together with his opinion as to the ability of the student to direct a school.

The following may be said with reference to the movement of classes when the practice school was in operation. The ringing of the bell announced the beginning of the classes. At once the monitors, one first and one second, went to their respective sections. The teacher announced in a loud voice what subject was to be taught; for example, Spanish grammar. Upon the ringing of the second bell, the first monitors assembled in an appointed place to receive the instruction of the teacher. At the same time, the second monitors took charge of their respective sections. The time for teaching grammar having been finished, the teacher rang two bells, indicating a change in subjects. At once the whole school became

very quiet in order to hear what the teacher was about to announce. With the ringing of another bell, the first monitors took charge of sections and the second monitors went to their recitations. After the instruction of the monitors was completed, the teacher spent the remainder of his time in supervision.

THE NORMAL SCHOOL IS ELEVATED TO THE GRADE OF SUPERIOR

The fondness of the natives for instruction and the great increase in educational interest since the founding of the normal school led to the conclusion that the course of training offered teachers should be prolonged and improved. Accordingly, on November 10, 1893, the government of the Philippine Islands drew up a proposed decree elevating to the degree of "superior" the normal school for men teachers in Manila, and approving provisionally the new regulations for that school. On December 15 of the same year another decree was issued with orders supplementary to the superior decree and the regulations of the normal school, approved November 10. In April of the following year a royal order of the ministry of the colonies confirmed the decrees which elevated the normal school to the rank of "superior." That part of the decrees and regulations which in any way modified or extended previous decrees is in substance as follows: [21]

ORGANIZATION

Under the authority of the director, it is provided that there shall be at least six teachers, besides one instructor in drawing, one for vocal music, one for gymnastics, three assistants, and the number of servants and dependents necessary for the school. One of the teachers shall be spiritual instructor and have charge of the religious ceremonies; he shall also be instructor in sacred history and ethics. Another shall discharge the special duties of prefect of morals. The remaining instructors shall be occupied in teaching other subjects.

SUPPORT

The salaries to be received by the director, instructors, assistants, and dependents, as well as the expenses for equipment and the rent of a building, shall be paid out of the local funds of the Islands.

From a note furnished the director of civil administration by the director of the normal school in May, 1889, we obtain

[21] See No. 14 in the bibliography.

the following estimate of the annual expenses of the normal school:

	Pesos.
A director and 4 teachers	4,000
Three assistant priests	1,200
One teacher in drawing	600
Fifteen positions, pupils in school	1,800
Servants' and waiters' services	600
Materials for teaching	1,000
Rent of the normal school building	4,000
Materials for drawing classes	120
Total	13,320

The normal school continued to receive similar support until some years after the American occupation (page 166).

CURRICULUM

The course of study then included two grades, elementary and superior. The work necessary for obtaining a certificate as elementary teacher extended over a period of three years. Pupils of the normal school who completed the course prescribed for elementary teachers and passed all examinations with an average of "excellent" were entitled to become candidates for the degree of superior teacher. Those who did not obtain the mark of "excellent," but that of "good" or "fair," were entitled to receive a certificate as elementary teacher and to take charge of a school of a lower grade.

The course of study for elementary teachers was as follows:

Subject.	Recitation.		
	First year.	Second year.	Third year.
Religion and sacred history	Daily	Daily	
Religion and morals			Daily.
Spanish grammar	Daily	Daily	Do.
Arithmetic	do	do	
Reading	do	do	Daily.
Writing	Half hour daily	Half hour daily	Half hour daily.
Music, drawing, and calisthenics	Daily	Daily	Daily.
Manners and right conduct	Biweekly	Biweekly	
Geography		Alternate days	
History of Spain and the Philippines		do	
Elementary geometry			Alternate days.
Pedagogy			Do.
Elementary agriculture			Do.

The requirements for the degree of superior teacher were a general average mark of "excellent" in the course prescribed for elementary teachers and in addition thereto the following:

Advanced pedagogy, together with a knowledge of legislation in force regarding primary instruction in the Philippines; religion and ethics; universal history; algebra; industry and commerce; the ordinary phenomena of nature.

PENSIONERS

No tuition was charged, the school being supported by the government, but all boarders were required to pay for their maintenance. Among the latter class were the government pensioners. At one time there were 30 of these, but the number was reduced to 20, at a later date to 15, and finally the system was abolished altogether, as it was thought unnecessary. The allowance of pensioners was 10 pesos per month.

REGULATIONS

At the end of each month a review was given covering all the subject matter passed over during that month. A private examination was given on the work of each quarter, and a public final examination at the close of the year.

The holidays set aside for the normal school were the following: Sundays, Thursdays, feast days, Ash Wednesday, All Saints' Day, the birthdays of the Spanish sovereigns and of the Prince of Asturias, the day of the patron saint of the governor-general of the Philippine Islands, the Christmas holidays extending from Christmas Eve until January 2, and the Day of the Three Kings. The long vacation extended from the close of the examinations, about the last of March, until the first of June.

The merit of pupils was recompensed with honorable marks, which were entered in the book of the institution, and with annual prizes whose solemn distribution took place at the close of the final examinations.

The following internal regulations, governing the conduct of the pupils, were promulgated on November 24, 1893, and incorporated in these decrees:[22]

1. Every pupil was required to be:
   - (*a*) A native of the Spanish dominions.
   - (*b*) At least thirteen years of age.
   - (*c*) Free from contagious diseases and in good health.
   - (*d*) Able to speak Spanish, understand the Christian doctrine, read and write, and know something of arithmetic.
   - (*e*) Able to write to the director, giving his Christian name, surname, birthplace, and age.
   - (*f*) Vaccinated.

[22] See footnote 8.

2. The fees for all except government students were 140 pesos a year, payable in two installments—on the day of entrance and on the 1st of October. Ten pesos were paid as an entrance fee. For this, students received instruction in all classes, including ornamentation and the use of all scientific instruments and collections, as far as necessary.

3. Students were provided with iron bedsteads, beds, white bedclothes, washstand, and table linen. They were given the free use of the infirmary, dispensary, and the free services of the physician in cases of ordinary illness.

4. If a student left the school before the end of the year, he had the right to recover all that he had deposited, except for the unfinished part of the month in which he left. For absences or late registration, no more than a month's fee was deducted.

5. A prescribed uniform was required to be worn on certain days.[23]

6. Every three months a report as to conduct, application, and improvement in studies was sent to the parents.

7. A gentle and persuasive method of discipline was used, and every effort was made to impress upon the mind of the youth the sentiments of honor and noble rivalry.

8. Pupils were admitted only on the opening day, unless they justified their absence on serious grounds.

9. Pupils were permitted to receive visits from their parents or persons authorized by them, only once a week, and that during the recreation. In no case were they allowed to leave the school with friends or write or receive letters without the consent of the director.

10. Every pupil was required to speak Spanish, even in private conversation, and to write letters in Spanish only.

11. No student was allowed to possess money, but parents were permitted to leave with the director an amount not to exceed 30 pesos. From this fund, sons were granted a moderate weekly allowance to be spent on useful or healthful objects or given to the poor.

12. There were no vacations except at the end of the school year, when pupils were not allowed to remain longer in the school. No pupil was permitted to leave during the year except in the case of poor health.

In accordance with the superior decrees of December 15, 1893, the following regulations were set forth, prescribing the manner of holding written and oral examinations:

WRITTEN EXERCISES

1. The applicant will sharpen the pencils and prepare the pens.

2. He will write an alphabet of capital letters and another of small letters on ruled paper to be furnished him.

3. He will write from dictation a paragraph taken from a book.

[23] The following clothing was prescribed: Two pairs of white pantaloons, 2 pairs of colored pantaloons, 2 white jackets, 1 black alpaca coat, 2 black ribbons for the neck, 1 black cap, 2 pairs of shoes, 1 pair chinelas, 10 white shirts, 2 colored shirts, 12 handkerchiefs, 12 pairs of socks, 4 pairs of drawers, 1 mat, 1 pillow, 4 pillowcases, 4 sheets, 2 bed covers, the necessary toilet articles. (See Grifol's La Instrucción Primaria en las Islas Filipinas, page 20.)

4. He will solve problems in arithmetic that have been approved by the judges.

5. He will write a simple explanation of not less than half a sheet on his choice of three pedagogical subjects drawn by lot.

6. The applicant will work in full all problems submitted to him and leave all of the explanations on the paper to hand to the examiner. He must also explain the pedagogical point involved in the problem.

7. The examinations will continue for such a time as the judges may think fit, not to exceed two hours for writing and the solution of problems, one hour for the explanation of pedagogical points, and another hour for copying the work.

ORAL EXERCISES

1. Questions on some point of a subject drawn by lot, except pedagogy.

2. A reading exercise in printed letters and in handwriting.

3. A grammatical analysis of the words and sentences in a dictated paragraph.

4. A simple lesson demonstrating how some part of the work of the training school should be conducted.

The question or exercise upon which each student was expected to recite in the oral test was determined in the following manner:

The president of the board of examiners put into a box 50 balls, each bearing a number. The secretary drew out a ball in the presence of the applicant and read the number. The applicant was required to take the question or exercise of the corresponding number and give an answer at once. The judges listened to the recitation and gave the student a mark. The judges were also permitted to ask suitable questions. The oral examinations did not continue more than half an hour.

TEACHERS' EXAMINATIONS

It was provided that examinations be held four times each year for the benefit of those who desired certificates as assistants. The examinations were conducted by the director and the teachers of the normal school.

The general division of civil administration was empowered to issue teachers' certificates upon the recommendation of the director of the normal school.

When there was a vacancy in any of the better positions of the teaching service, the place was filled by competitive examination: any one who had a certificate as elementary teacher was eligible to enter the contest. In case of a tie in the examination ratings obtained, consideration was given to the teacher of most experience or to the one who had the best record in the practice school.

THE NORMAL SCHOOL BOOTH AT THE EXPOSITION

The Philippine Territorial Exposition was held in Manila in 1895. At this exposition was an exhibit by the Superior Normal School. It is interesting to note the contrast between that exhibit and those which are given at the present day by the public schools at the Philippine Carnival.

In the center of the hall was a large booth surmounted by the sign of the normal school. On the right-hand side hung 12 geographical and statistical maps, showing the condition of public instruction in the Philippines. All of the villages in which there were schools were shown, even the number of grades in the various schools being given. These maps were drawn by the pupils of the normal school under the direction of their teachers. On the left side were the plans of the building of the Superior Normal School and the observatory of Manila. On each side were photographs of the pupils in their holiday, Friday, and ordinary uniforms. There were photographs of the various rooms in the building, including the chapels of the fathers and the students, the dining room, the study hall, the upper classrooms, the baths, the garden, the basin, and the gallery.

Below these plans were carefully colored maps of Spain and the Philippines, surrounded by a collection of trophies and prizes and by beautiful copy-book pages, the whole forming an artistic and intricate pattern on a bright green ground, surmounted by the normal-school shield. This was drawn by the boys in the practice school.

In the center of the normal-school booth was a table with drawers, and on its sides two pyramid-shaped stands on which were placed the following agricultural implements in miniature: A spade, a shovel, a hoe, a rake, a pick, a trowel, a mattock, a hatchet, various instruments for cutting, a harrow, a combination pickaxe and hammer, a Coleman cultivator, a Scott cultivator, a foot ruler, a Crasskill ruler, a Bochin seeder, a lawn mower, a hay mower, a riddle, a Bochin straw cutter, a Bochin weeder, a modern thrasher, a plow, a two-pronged fork, a small grape vat, a coconut vat, a grape squeezer, a well, and a hydraulic chain pump.

In the central cabinet were the following: Different prizes given in the Normal School, consisting of medals, diplomas, and recitation rewards; the Regulations in Force, as applied in the schedule of the course for superior teachers; the Elements of Pedagogy, by Father Jose Murgadas; the three volumes of

Spanish grammar lately published by Father Santiago Mazo; Yove's Sacred History, in three parts; Carderara's Industry and Commerce, dedicated to the normal school. This cabinet also contained the work of several provincial teachers, including pedagogical and literary articles, and maps and charts of various kinds.[24]

THE PEDAGOGICAL ACADEMY

The pedagogical academy was an association of teachers for the study of educational questions and the betterment of the teaching profession. The academy was founded by the director of the Superior Normal School on February 23, 1894. The organic regulations according to which the academy was to be governed were approved by the governor-general on July 20, 1894. These were in substance as follows:

1. The academy proposes to cultivate the pedagogical studies among the teachers of the Philippines, to promote a love for these, and to devise suitable means for their development.

2. The board of directors shall be composed of the director of the normal school as president, the dean of the academic classes as vice-president, two councilors to be chosen by the president and vice-president, and a secretary to be elected by the board.

3. There shall be three classes in the academy. The first class shall be the superior teachers; the second class, the elementary teachers; and the third class, the assistant and the substitute teachers.

4. In order to be admitted to the academy, it is required that: (*a*) An application addressed to the board shall be filed with the president; (*b*) the credentials of the applicant, together with a statement regarding his profession or business, shall be submitted; (*c*) the applicant shall possess a good name and an exemplary character.

5. Teachers living in the provinces may become members in the same manner as others.

6. The members of the academy will meet fortnightly in the normal school, at an hour previously appointed, for a literary performance. The meetings will continue for two hours, and the following will be the order of business: (*a*) Call to order; (*b*) reading of minutes of the last meeting; (*c*) the subject to be discussed will be proposed by the president, and some member named by him will talk on the point indicated. In lieu of this, a lecture of not more than thirty minutes' duration will be given by a member of the society; (*d*) remarks by the chairman; (*e*) adjournment.

On October 1, 1894, the governing board of the academy held its inaugural session in the normal school. At this meeting a librarian and a director of the pedagogical museum were elected.

We can better understand the purpose of this association

[24] Boletin Oficial de Magisterio Filipino, 1, 34.

and more fully appreciate the work which it accomplished by examining the following excerpt from a report of the secretary. This report included a general review of the work of the academy during the first two years of its existence.

The director of the Superior Normal School, cognizant of the necessity of providing some means by which the teachers who graduate from the normal school may develop, proposed the establishment of a pedagogical academy. This association was the means of impressing upon the teachers the dignity and honor of their profession, inspiring them with the desire to spread morality and culture among their pupils, to carry intelligence from province to province and from town to town, to awaken the families to the call of necessity knocking at their doors, and to enkindle in the minds of the common people the sentiments of virtue, knowledge, patriotism, and Christianity; as these things insure more and more the moral and material enlargement of the Archipelago.

Enough has been said to convince one of the utility and great importance of the pedagogical academy. It is filling a want which has been felt throughout the history of these Islands, and is destined to remedy many of the faults of the teaching profession.

In corroboration of what I have just said, let us take a look into the past. Not long ago, the schools of the Archipelago were rated as woefully deficient. This condition of affairs resulted from a lack of schoolhouses and equipment, a lack of interior organization, poor attendance, the inexperience of the teachers, and the want of pedagogical knowledge. It is not my purpose to censure the Spanish Government nor reprove the teachers, but, with my hand upon my heart, I am constrained to lament the fact that in spite of the ardent fondness and powerful means put forth by the government of His Majesty and the diligence of those in charge of education in this distant region the results up to date cannot be compared with those achieved elsewhere in the same time and with the same labor.

The academy tends to dissipate these difficulties. At first the effect may be small, but it will become constantly greater as the fight goes on against those things which restrain or annul teaching.

The academy has already given palpable proof of its vitality and usefulness in disentangling the difficulties that are opposing the instruction and education of the Filipino youth. Evident proof of this truth lies in the good results reported by the teachers who took part in the literary sessions held periodically in the academy. In these meetings, they acquired useful knowledge which was entirely new. Even the teachers in the provinces who did not attend the sessions were benefited by those meetings, accounts of which were published in the Official Bulletin for Filipino Teachers.

Our academy has other effective means of instruction. These are the pedagogical library and the museum which the academy has been forming little by little from the beginning, in order to refresh and enrich the knowledge of the teachers.[25]

The following may further serve to show the character of the work undertaken by the pedagogical academy.

[25] See No. 5 in the bibliography.

THE FIRST PEDAGOGICAL CONTEST IN THE PHILIPPINES

This contest was instituted by the Pedagogical Academy, through its president, the director of the Superior Normal School, for the purpose of stimulating interest in matters educational. The zest and enthusiasm with which the contestants and the audience entered into the occasion show unmistakable signs of an educational awakening. The range of subjects discussed and the manner of treatment are not without significance. Incidentally, the occasion was representative of the rather striking type of literary entertainments which characterized the Spanish schools of that day and is still common in the better private schools of the Islands.

This contest was held on December 3, 1895, exactly thirty years after San Francisco Xavier was declared patron of the normal school. We cannot do better than let the chronicler of the time tell the story of the pedagogical contest in his own way.[26]

> The occasion was solemnly begun, and it took place in the chapel of the Superior Normal School for teachers, the hall eloquent in its simple, but fitting decoration. The top of the stage was protected by a curtain artistically painted for the occasion. Under this artistic dais was placed a presidential table which was occupied by the judges of the contest. Sitting near this table was the honorary president, his excellency, the governor-general of these Islands; on his right, the archbishop of the diocese; and, on the left, the major-general of the naval squadron. On both sides, the seats in the first row were occupied by the director-general of civil administration, the president of the royal audiencia, and the fiscal and the governor-general of Manila. The other seats were occupied by a numerous and select audience.
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> A symphony executed with great precision opened the meeting. Then followed a short opening address by the chairman of the judges of the contest. The speech may be summed up as follows: The exordium consisted in declaring the solemnity, importance, scope, and transcendency of pedagogical contests, emphasizing the fact that this, the first to be celebrated in the Philippines, opened a new era and should be marked with golden characters in the annals of primary education in the Islands.
>
> The subject matter of the address was the following: The Greatness of the Profession of the Primary Teachers, in which two principal arguments were discussed and which formed the body of the address. These two arguments were: The origin of the profession of teaching and the object of the same. In the second argument was considered, in meaning words, the good that it gives to individuals, as well as to the family and the community as a whole. On the other hand were explained the evils that confront not only the vicious teacher, but also the teacher who is negligent in the performance of his duties.

[26] This account is an abridgement of that which appears in Boletin Oficial de Magisterio Filipino, 2, No. 1. See No. 23 of the bibliography.

The peroration of the speech contained an expression of gratitude to his excellency, the governor-general, to the metropolitan archbishop, to the director-general of civil administration, to the superior of the Company of Jesus, and to the director of the Superior Normal School, for their protection and patronage of the first pedagogical contest held in the Philippines and for the prizes which they had offered to the winners of the five themes. The speaker also thanked the teachers, who had rendered their services to make the contest a success, praising those who were awarded prizes, giving them his good wishes, and encouraging those who were less fortunate, so that in future contests they may also wear the wreath of victory.

This was followed by the reading of a paper, containing the result of the work done and the prizes obtained. The gist of the paper read was as follows: Five compositions were awarded prizes for excellence, 28 others were rated as "good," while 7 were rejected because the writers did not observe the instructions. The paper whose subject was To the Progress of the Philippines was unanimously considered by the judges as the best, and therefore received first honors.

After the secretary had read the subject of this composition, the sealed envelope containing the paper was brought on a silver plate to his excellency, the governor-general, who announced the name of the author, Don Catalino Sevilla, a teacher, by merit, of the first municipal school of Binondo. The author having declined to read his paper, his emotions preventing him from doing so, the task was undertaken by Señor Baldosano, whose excellent reading helped to emphasize the beautiful thoughts of the composition. Immediately after the reading, Señor Sevilla was called to the front to receive from the hands of his excellency, the governor-general, the prize offered by his excellency. It consisted of the works of Señor Benor in three volumes, Arquitectura de las Lenguas. The volumes were elegantly bound in Russian leather; on the obverse was a monogram of the name of Jesus, inlaid with silver; in the center was inscribed, in plated letters, First Pedagogical Contest. Just below this was inlaid in silver the arms of the city of Manila. On the back of each of the three volumes was the silver inscription, First Prize, and in the lower part were the silver initials of the governor-general, with the crown of a marquis.

In this paper, the writer expressed his sorrow at the scarcity of children attending schools in most of the towns of the Philippines, and gave three causes for this sad misfortune, with the corresponding remedies.

1. Lack of schoolhouses, materials, and furniture.—He proposed a remedy to the effect that the municipalities should work out a plan for the building of schoolhouses. He treated this point with practical wisdom, praising all, without laying blame on anybody.

2. Internal organization of the schools.—He prescribed moderate treatment. He divided the schools into three classes which might be subdivided indefinitely, according to the number of children, and he also presented the program of study for each of the sections. He insisted that a teacher should prepare the lesson before going to the class and that his explanations should be made simple in order to reach the understanding of the pupils. He recommended the method of teaching by object lessons. He treated of reward and punishment of pupils, citing opinions to substantiate his statements and alluding to the fact that the Eternal Judge rewards the good and punishes the bad. He concluded this argument by saying that prizes are not sufficient to gain the love and good will of the pupils. He condemned

those teachers who cannot be respected by the pupils without resorting to harsh punishment.

3. Administrative acts of local authorities.—He said that these should be efficient and continuous, and finished his essay by quoting the words of Governors Izquierdo and La Torre.

After this, the secretary proceeded to the consideration of the essays for the second theme whose subject was A Treatise Concerning the Teaching of Spanish in the Philippines. The envelope in which it was inclosed was opened by the archbishop of Manila, and the author was found to be Don Mariano Leuterio, superior teacher and secretary of the Pedagogical Academy.

He divided his essay into three parts: Importance of the wide extension of the Spanish language in all parts of the Philippine Archipelago; legislative acts conducive to this end; and comments on the Spanish language, showing the difference between language and grammar.

1. The author began with the statement that language is to the nation as a mother is to her child, the home to the family, and society to the individual. He went on to prove that the most effective means to spread education, agriculture, industry, and commerce in the Philippines is through the diffusion of the Spanish language everywhere.

2. This paragraph showed that the author had fathomed the depths of legislation.

3. This paragraph marked the line between the study of the language and the study of grammar and the methods to be pursued for the acquisition of both.

After the reading, Don Mariano Leuterio was called to receive his prize from his excellency, the prelate. It consisted of a magnificent geographical, statistical, and historical dictionary of Spain and its domains. He received an ovation from the audience as he took his seat, after receiving the prize.

The third theme was A Brief Treatise Concerning the Duties of Teachers in the Philippine Islands. The prize was obtained by Don Pedro Serrano. Sr. Baldosano read a part of this composition, which was greatly applauded by the audience. The giver of the prize, Señor Bores, himself delivered the prize, which was an elegantly bound edition of Monlau's Rhetoric and Poetry.

There were no papers presented for the fourth theme, and the prize, offered by the superior of the Company of Jesus, was awarded to the essay that got second place in the first theme, whose author was found to be Don Florencio L. Gonzales, vice president of the academy, superior teacher, and director of the College of the Immaculate Conception. The author read a part of this essay, which was greatly applauded by the audience. The prize, consisting of the works of Donosa Cortes, in four volumes, was awarded by the governor-general.

The secretary then passed to the fifth theme, Discourse on Teaching by the Object Method. Padre Isidoro de la Torre opened the envelope, and the superior teacher and proprietor of the school in Quiapo, Don Pedro Serrano, received the prize, consisting of a book, Heterodozos Españoles, by Don Marcelino Menendez Pelayo, from the hands of the governor-general.

After the reading of the records of the secretary was finished, the contest was concluded by a hymn sung by the students of the Superior Normal School. The press of Manila eulogized the great success of the first pedagogical contest; the director of the Superior Normal School, who had origi-

nated the contest; the Pedagogical Academy; and all the teachers who contributed to this intellectual competition.

We cannot close this short description of the pedagogical contest without quoting the words of El Comercio, which show the quality of our modest celebration: We consider this contest of such importance, that we thought to devote a special edition to it, thinking that the celebration of yesterday, by its influence upon the culture and advancement of the Filipinos, in all spheres of moral development, and the stimulus it gives to public education, deserves more attention than the limited applause of a mere local and passing comment.

* * * * * * * *

And although the spirit of yesterday has yet to show the public the practical application of the varied activities discussed in the various essays, yet the knowledge that there exist energy and talent among those most concerned in primary education in these Islands, as shown in the recent contest, namely, among bright young pedagogues, merits the decided help and protection of the government and of the public in general; and these circumstances are sufficient to make us dedicate our pen to the contest. It was indeed a great lesson that was taught yesterday at the Superior Normal School for teachers, which was not perhaps realized by all. As the sound that it produced in the atmosphere echoes and reëchoes to unknown limits, as a stone that falls on the surface of a lake causes the waters to move in concentric circles away from it, until they reach the very shore of the lake itself, so will the celebration of yesterday extend its undying influence over every locality in the Archipelago. It will encourage the unpretentious teacher in some dark corner of these Islands to carry on with greater efforts his educational work and to live up to the heights of his noble profession; and as his extraordinary talents and activities are placed before the eyes of the public and receive its applause, his individual efforts will be more and more encouraged, and will thus contribute greatly to the welfare of his country. May God, in His infinite kindness, make this first pedagogical contest in the Philippine Islands the beginning of a new era of progress for the education of the Filipino youth.

THE NORMAL SCHOOL UNDER THE AMERICAN FLAG

A STATEMENT TO THE PATRONS OF THE SCHOOL

Soon after Spanish sovereignty came to an end in the Philippine Islands, the following circular letter was issued by the authorities of the normal school:

This center of education, well known to the Filipino people as it now is in the thirty-third year of its existence, has trained thousands of young men for every province in the Archipelago, and still remains open to all those who desire to avail themselves of its advantages.

The few fathers of the society, who conduct the school, will be obliged in the future, as in the past, to give its pupils a sound, moral, and religious education, so that they may fulfill the desires of the Filipino people, who are Catholic and intend to remain so; and second the aims of the United States Government in bringing about the welfare of the country.

Teaching will be given in Spanish, the only language in general use in

the Archipelago, and indispensable now and for a considerable period in the future. For this reason, three courses in Spanish are compulsory.

Three courses with a daily recitation in each will also be given in English, since English has not only come to be of great value, but a knowledge and use of this language are always necessary.

As a study of these two languages is somewhat difficult, it must occupy a greater part of the time of pupils, to the reduction of other courses which may be less important. These are preparatory courses essential to the primary and secondary teacher.

The degrees conferred by the school have such a value that they will be recognized by the American Government, and in any case will be sufficient proof that the pupil is ready for any position.[27]

In 1899, Father Pedro Torra, giving evidence before the Philippine Commission regarding the educational conditions in the Islands, furnished the following interesting statement concerning the normal school and its graduates, which is given in abstract:[28]

In order to be a teacher in an official school, a degree as master from the normal school was exacted, but at times when there were no such persons holding degrees substitutes were appointed, and only at such times.

Of those who have graduated from the normal school some have died. Others have never cared to teach, having pursued the course only to learn Spanish and get a general education. If they had all desired to teach, there would have been no scarcity of teachers. The career of teacher is an arduous one, involving a great deal of hard work, and they do not care to undertake it. The salary which would be sufficient in an ordinary walk of life is not sufficient for a teacher. It does not compensate him for the amount of hard work he has to do to fit himself for his profession. Those who have actually taken up their profession have done it either because they have been encouraged to do so by the fathers, or as a simple matter of honor. If it had not been for the fathers, hardly any of them would have put their learning into practice. Then, too, it must be remembered that in the towns there were other things which would bring them much more remuneration than they would receive as teachers. For instance, they could serve as interpreters for the petty governors, which, without the hard work involved in exercising their profession, would bring them a very much higher return. The way to induce them to exercise their profession would be to give them better compensation, more privileges, and make the profession more attractive for them.

Teaching was obligatory only for those to whom the government paid a pension. These were required to teach for a period of ten years.

The school has no connection with the United States Government, except that the latter has continued to pay us the amount the Spanish Government gave us, and the courses are continuing. The amount of the endowment is 8,880 pesos a year; but in consideration of the fact that the necessaries of life are a great deal more expensive now than formerly, an increase of this amount has been asked for through the inspector of schools. An increase

[27] Copy in the Ateneo, Manila.

[28] Report of the Philippine Commission (1900), 2, 285.

equivalent to one-third of the present amount is necessary for the continuance of the establishment.

The following year, a complete prospectus was issued, showing the degrees offered by the school and the conditions necessary to obtain these degrees, the entrance requirements of pupils, the length of terms, and supplementary classes, and giving an account of the practice classes, methods of discipline, terms and accommodation offered to boarders, requirements in dress, and the course of study.

The course of study as revised at the opening of the school year in 1900 was as follows:[29]

FIRST YEAR

Spanish language	Recitation daily.
English language	Recitation daily.
Arithmetic	Recitation daily.
United States, general, and Philippine geography	Recitations on alternate days.
Catechism and sacred history	Recitations on alternate days.
Writing	Half an hour daily.

SECOND YEAR

Spanish language	Recitation daily.
English language	Recitation daily.
Arithmetic and elementary algebra	Recitation daily.
United States and Philippine history	Recitations on alternate days.
Explanation of the catechism	Recitations on alternate days.
Writing	Half an hour daily.

THIRD YEAR

Spanish	Recitation daily.
English	Recitation daily.
Elementary geometry and surveying	Recitation daily.
Elementary pedagogy	Recitation daily.
Elementary agriculture	Recitation daily.
Religion and morals	Recitations on alternate days.
Lectures on politeness	Weekly.

The study of Spanish and English comprised all the grammar, suitable exercises in reading, writing from dictation, analysis, translation, composition, and speech making.

The requirement for candidates for the degree of superior teacher was the possession of the degree of elementary teacher with a rating of "excellent" and in addition the following:

Advanced pedagogy.
Elements of physics, chemistry, and natural history.
Studies and literary exercises in Spanish and in English.
A study of certain religious, moral, and ethical questions of value.

[29] The prospectus mentioned in No. 25 of the bibliography.

ELECTIVES

Vocal and instrumental music.
Drawing of every kind.
Hygienic gymnastics.
Meteorology and seismology.
General principles of fine arts.

In sending out the above-mentioned prospectus, Father Torra inclosed the following circular letter:

The change that is taking place in the social and religious life of the Philippines makes every day more necessary the maintenance and multiplication of Catholic teaching centers of all kinds and grades, which may deserve particular confidence. On the other hand, the attitude of the Government of the United States on the subject of education in this country is unknown. We cannot tell how they will regard institutions that have not been established by the Government, and are therefore unofficial, or what value they will attach to the degrees won in these institutions, and what requirements they will exact in the future.

The Jesuit fathers, who claim by the help of God to have done some little good in the Islands, through the sound instruction and Christian education which they have given for many years in the Superior Normal School, are anxious to continue at work, if this is for the good of the country. They hope that the Government will recognize the value of their work. Up to the present, the great majority of those who have obtained the degree of schoolmaster in the normal school have used their education both to teach and to obtain dignified positions.

This being so, I am sending you the inclosed prospectus, in order that, if you think fit, you may show it to all parents of your acquaintance, whom you think may be interested, because the more pupils the normal school obtains, the more consideration it will secure: it will be able to interest the Government and the general public of these Islands, and more thoroughly diffuse the Catholic faith.

A STATEMENT TO THE PHILIPPINE COMMISSION

In September, 1900, the director of the Superior Normal School addressed to the Philippine Commission the following exposition:

The object of this establishment is the creating of suitable teachers to fill the position of schoolmaster in the public schools throughout the Philippine Archipelago. It was founded by the Spanish Government and inaugurated on the 23d of January, 1865.

The course covered three years, and included all those subjects usually taught in the primary schools. In 1893, an extra course was added to amplify the knowledge of the teachers and equip them for giving superior primary instruction. By virtue of this improvement, the school was raised to the category of a superior normal school. Since the last course was completed, the study of the English language has been added in all classes, including those in the school of practice. This school of youth is associated with the normal school, and in it the future masters are exercised in the practice of teaching.

The Spanish Government appropriately subsidized this school, and paid the expenses of the material and furniture, and therefore the teaching was, and still remains, entirely gratuitous. At the close of the Spanish dominion in these Islands, the Government of the United States continued to give this subsidy, and even made it somewhat larger, up to a little more than a year ago.

The average number of pupils when conditions are normal is:

In the course for the degree of master	450–500
In the school of practice	150–200
Total	600–700

The present number of pupils is:

In the course of the degree of master	304
In the school of practice	201
Total	505

The total number of masters up to the present is	1,606
Annual average	53
Total number of assistants	340

Some of the above-mentioned pupils are boarders, and their number has varied according to the capacities of the various buildings which the normal school has successively occupied. In 1896, the boarders numbered 184; at the present time there are 102. The unpeaceful state of the times in many provinces of the Archipelago has been the reason that more pupils have not entered.

The school being without suitable quarters, the Company of the Jesuits erected in Ermita the building now occupied by the normal school. For this undertaking, it was necessary for the mission to burden itself with a considerable debt which it hoped to extinguish in a few years by the help of the 4,000 pesos' loan which the Spanish Government offered it, and the economies it would be able to make. As it stands now, the structure has cost more than 200,000 pesos and at the present could not be erected at three times the cost. Therefore, we do not believe that we exceeded the bounds of justice when we asked last year of the Government of General Otis an increase of appropriation. Nevertheless our petition was rejected.

The increase of the endowment has become more necessary on account of the notable increase in price which articles of actual necessity have reached. Without claiming, then, any right by the sacrifice mentioned or the merits of our teaching, the writer limits himself to submitting to the consideration and wisdom of the Commission the necessity in which the normal school finds itself for an increase in endowment, in order that with more ease and better results it may continue its work in the future.

Besides this, in order that this institution may retain its reputed importance and show a reason for existence, it is necessary that it should acquire a special title for the granting of degrees to teachers. This has not been done in the last two years.

It is necessary in the same way to recompense the masters well and to stimulate their zeal by all possible inducements, otherwise the last of

them will withdraw from the occupation of teaching to seek more gain in other employments or business which call for much less work and subjection.

The undersigned in the name of the corporation which he represents asks, moreover, that if he inspires the Commission with sufficient confidence in his corporation it will vouchsafe to leave it entire liberty in the election of the teaching staff, texts, and methods of teaching, and above all in the teaching and practice of the Catholic religion in the same way as this liberty is understood and practiced in the Catholic colleges of the United States.

Finally, as it is of the utmost importance to the teaching institutions represented by me to know as soon as possible and with all possible certainty for future guidance and determination what is to be the future lot of this normal school, I ask the Commission to have the kindness to manifest to me, with loyalty and frankness, its feeling and wishes regarding the above-mentioned points and any other which may at the time affect the well-being and prosperity of this establishment.

THE CREATION OF THE DEPARTMENT OF PUBLIC INSTRUCTION

The Commission did not grant the foregoing petition. On January 21, 1901, the Philippine Commission enacted the law creating the Department of Public Instruction. This Act placed all public schools under the immediate charge of the Director of Education. Some of the duties assigned this official were the general supervision of the entire Bureau, the fixing of a curriculum for all public schools, the prescribing of the attainments necessary for teachers, the appointment of teachers, and the fixing of a definite salary for each. The Act further provides that no teacher or other person shall teach or criticize the doctrine of any church, religious sect, or denomination, or shall attempt to influence the pupils for or against any church or religious sect in any public school.[30]

In contemplation of the foregoing Act, the reasons for declining the petition of Father Torra are obvious. While his request was in perfect accord with the practices of the Spanish Government, an institution endowed by the Government and managed wholly as a private enterprise, without any direction or supervision by the Government, is very unusual under the American flag.

A REQUEST FOR AUTHORITY TO CONTINUE THE NORMAL SCHOOL

On March 18, 1901, Father Torra wrote Brig. Gen. George W. Davis, provost-marshal of Manila, as follows:

I have the honor to inform you that the school called the Superior Normal School for Schoolmasters is about to be incorporated by law, but in the meanwhile, according to the president of the Philippine Commission, it

[30] Act 74 of the Philippine Commission.

requires authorization to continue in the work of teaching. The name of the school up to the present has been the Superior Normal School for Schoolmasters and in the future will be known by this name.

I hope, sir, that you will be kind enough to grant written authority for the continuation of this school on the same conditions as during the last two years.

The following reply to the foregoing communication was submitted by Dr. David P. Barrows, at that time city superintendent of schools for Manila:

This institution, although belonging to and under the direction of a religious order, was established by the Spanish Government as a factor in its system of instruction, all salaries and expenses being paid from the public funds. This arrangement continued after the American occupation by a verbal order of the military governor authorizing the payment to this institution and to the Ateneo of 1,145 pesos every month for the salaries of the teachers and 187.17 pesos for rent of the buildings used by the said religious order. The normal school was also furnished material for its classes through this department.

By a recent resolution of the Philippine Commission, this institution ought not to receive any aid from the public funds after the present month. This school will not henceforth form part of the public-school system, but will be on the same footing as any other private school. In section 25 of the law establishing the Department of Public Instruction we read: "There shall be nothing in this law to prevent, hinder, or stop the formation and continuation of private schools in these Islands." It appears that written authority is not necessary for the continuation of this institution as a private school, but there seems to be no reason why it shall not be given.

THE WITHDRAWAL OF FINANCIAL SUPPORT AND FINAL CLOSING OF THE NORMAL SCHOOL

On March 30, 1901, Maj. Gen. Arthur McArthur promulgated an order authorizing the Superior Normal School to continue its work as a private institution, but withholding further financial assistance.

Owing to the unsettled times incident to the war, the increase in the cost of living, the withdrawal of financial support, the discarding of Spanish as the language of the schools, and the change in the sovereignty of the Islands, the normal school was never able to get fairly upon its feet after the American occupation. However, it remained open and continued to turn out small classes of graduates until 1905, when its doors were finally closed after a useful career of forty years.[31]

[31] The present Philippine Normal School is in no way an outgrowth of the Spanish Normal School for Men Teachers. For several years the two institutions were located on adjoining campuses, but each managed its own affairs and sent forth its graduates entirely independent of the other.

GRADUATES OF THE NORMAL SCHOOL FROM 1866 TO 1905

	Graduates.		Graduates.
1866	14	1887	46
1867	25	1888	59
1868	27	1889	50
1869 [32]	0	1890	39
1870	29	1891	40
1871	39	1892	46
1872	54	1893	51
1873	53	1894	111
1874	65	1895	32
1875	79	1896	39
1876	120	1897	26
1877	78	1898	26
1878	81	1899 [33]	0
1879	66	1900	10
1880	55	1901	12
1881	51	1902	20
1882	50	1903	19
1883	29	1904	25
1884	33	1905	11
1885	34		
1886	49	Total	1,693

BIBLIOGRAPHY

1. Barrantes, Vicente. La Instrucción Primaria en Filipinas desde 1595. Madrid (1870).—In the Philippine Library.
2. Blair, Emma H., and Robertson, James A. The Philippine Islands, 1493–1898. The Arthur H. Clark Company, Cleveland (1904).—A documentary history comprising accounts of explorations, military expeditions, descriptions of the Islands and their peoples, and records of the Catholic missions. 55 volumes.
3. Bases.—A code of regulations applicable to students of Mindanao who desire to attend the Normal School. MS. in the Ateneo de Manila, dated May 18 (1894).
4. Bases propuestas entre la Compañía General de Tabacos ỳ por la Compañía de Jesús.—This document is a preliminary agreement for the erecting of the building in Ermita where the Normal School was located from 1886 until 1905. MS. in the Ateneo.
5. Boletín Oficial de Magisterio Filipino. Manila (1895–1898), 1–3.—Copies in the Philippine Library, the Ateneo, and the Central Seminary of San Francisco Xavier.
6. Comisión de Estudios. A statement dated May 3, 1866, giving the names of the Commissioners of Instruction. MS. in the Ateneo.

[32] During the first few years of the history of the normal school, the annual sessions closed in December; but in 1869 the time of closing was changed from December until the following April; hence the lack of graduates for 1869.

[33] In 1899 no one took the examination on account of the war which was then in progress.

7. Communication to the Governor-General by the Director of the Superior Normal School regarding the renting of a building at Santa Ana, dated August 14, 1880. Reply of the Governor-General, dated October 30, 1880. Letters in the Ateneo.
8. Creación Oficial del Observatorio de Manila y relaciones de la misma con la Escuela Normal (1884–1900).—MS. in the Ateneo.
9. Cuenta de Gastos de Instrucción de la Escuela Normal de Maestros de Instrucción Primaria de esta Capital.—This is a statement of the equipment, together with the cost of each article. MS. in the Ateneo.
10. Cuevas, José Fernandez. Plan de Instrucción Primaria, April 20 (1861). Also, Instrucción Primaria, April 29 (1861).—MSS. in the Ateneo.
11. Datos facilitados al Exmo. Sor. Director de Admon. Civil por el R. P. Director de la Escuela Normal a fines de Mayo de 1889.—MS. in the Ateneo.
12. El Seminario y Escuela Normal de San Xavier a María Imaculada en el quincuagésimo aniversario de su Definición Dogmática (1904).—MS. in the Ateneo.
13. Estados de la Escuela Normal.—A series of tables and outlines, giving statistical and other information. In the Ateneo.
14. Grifol, Daniel. La Instrucción Primaria en las Islas Filipinas.—A collection of school laws from 1863 to 1894. Manila, 1894. In the Philippine Library, the Ateneo, and the Central Seminary of San Francisco Xavier.
15. Historia de la Escuela Normal de Manila (1865–1872).—MS. in the Ateneo.
16. Index of Examinations for the Degree of Teacher (1865–1905).—A book in the Central Seminary of San Francisco Xavier.
17. Instrucción Primaria. Clippings from the Diario de Manila, September 19 and 20 (1883).—In the Ateneo.
18. Instrucción Primaria.—Clippings from La Oceanía Española, September 18 and 20 (1880). In the Ateneo.
19. Luengo, Francisco G. Martin. A letter to Father Juan Ricart, written from Surigao, January 25 (1881). In the Ateneo.
20. Official Register, giving a digest of decrees, correspondence, and other information relating to the Normal School. A book in the Central Seminary of San Francisco Xavier.
21. Padilla, Mariano. San Carlos, Pangasinan, graduated 1888. A MS. prepared by Mr. Padilla. It is in the possession of the author. Facsimiles of diplomas appear in the appendix.
22. Párrafo sobre las Escuelas Normales.—A general discussion on secular normal schools. MS. in the Ateneo.
23. Primer Certamen Pedagógico de Filipinas. This is a book of about 100 pages comprising the proceedings and essays presented in the first pedagogical contest. The book is No. 1 of volume 2 of the Boletín Oficial de Magisterio Filipino. In the Ateneo.
24. Proyecto de Plan de Instrucción Primaria y de Establecimiento de una Escuela Normal de Maestros en Manila redactado por la Junta nombrada al efecto en 1855, y Presentado al Gobernador General en 7 de Marzo de 1861 seguido del voto particular del vocal P. Gainza, Dominico, sobre Escuelas en idioma Castellano, al cual se opone.—MS. in the Ateneo.

25. Prospectos y Reglamentos de la Escuela Normal de Manila (1900–1901).—In the Ateneo.
26. Reglamento Interior de la Escuela Normal.—MS. in the Ateneo.
27. Relación de la Fundación, Régimen Interior, Desarrollo y Frutos de la Escuela Normal de Maestros escrita en 1887.—MS. in the Ateneo.
28. Report of the Philippine Commission, 1900. Government Printing Office, Washington (1900).
29. Education in the Philippines. Report of the United States Commissioner of Education, 1902. Government Printing Office, Washington (1903), 2.
30. Ricart, Father Juan. A letter written to the Director of Civil Administration, October 1, 1883, regarding the destruction of the normal school building. In the Ateneo.
31. Reyes, Francisco. Comunicación al Gobernador General por el Presidente de la Comisión de Estudios.—MS. in the Ateneo.
32. Varios Proyectos de Planes de Estudios Redactados por las Comisiones Nombrados al Efecto. Manila (1856–1866).—MSS. in the Ateneo.

ILLUSTRATIONS

PLATES I and II. Certificates issued by the Spanish normal school.
III and IV. Indorsements on certificates issued by the Spanish normal school.

EL DIRECTOR GENERAL DE ADMINISTRACION CIVIL

DE LAS ISLAS FILIPINAS

Por cuanto D. Mariano Padilla natural de San Carlos provincia de Pangasinan y maestro de instrucción primaria de la clase de Normalista ha acreditado su suficiencia en los ejercicios de oposición celebrados para la provisión de las escuelas de TÉRMINO DE PRIMERA CLASE, en los días [illegible] ante el Tribunal constituido al efecto, mereciendo la calificación de APROBADO.

POR TANTO, con arreglo al artículo 37 del Reglamento de 20 de Diciembre de 1863 y en uso de las facultades que me confiere el Superior Decreto de 9 de Setiembre de 1874, he expido este TITULO para que pueda desempeñar una escuela pública de TÉRMINO DE PRIMERA CLASE, debiendo disfrutar los sueldos, derechos, privilegios y exenciones, correspondientes con sugecion al Real Decreto y Reglamento aprobados en la citada fecha de 20 de Diciembre de 1863, y reforma establecida por Superior Decreto de 29 de Julio de 1878.

De este Título, se tomará razón en la Contaduría de estos ramos, en la Escuela Normal de maestros, y Negociado de este Centro, sin cuyo requisito no será admitido; y oportunamente se consignarán á continuación de él por certificación del Jefe de la provincia, las fechas de los nombramientos posesión y cese de la escuela en que sirva el interesado con nombramiento de esta Dirección general.

Dado en Manila á veintisiete de Octubre de mil ochocientos noventa y dos

El Jefe del Lo Decisivo del Fomento, El Director General, El Jefe del Negociado,

Marqués de Ordax — Augusto Avilés — Ramón Rico

Título de maestro de instrucción primaria de la categoría de término de primera clase expedido á favor de D. Mariano Padilla.

PLATE I. CERTIFICATE ISSUED BY THE SPANISH NORMAL SCHOOL.

EL DIRECTOR GENERAL

DE

ADMINISTRACION CIVIL DE LAS ISLAS FILIPINAS

POR CUANTO D. Mariano Padilla y Claudio natural de S. Carlos provincia de Pangasinan de 20 años de edad, alumno de la ESCUELA NORMAL de Maestros de instruccion primaria de Manila ha cursado en ella las asignaturas que prescribe el REGLAMENTO ORGANICO de 20 de Diciembre de 1863 y probado su aptitud y suficiencia ante el Tribunal competente en los examenes verificados en Marzo de 1888 obteniendo la calificacion de Sobresaliente

En uso de las facultades que me confiere el Superior Decreto de 9 de Febrero de 1874 y con arreglo á los Arts. 7, 27 y 28 del citado Reglamento le expido este TITULO que le habilita para desempeñar una escuela pública de niños en cualquier pueblo de estas Islas, con la categoría de Ascenso que le corresponde, sin perjuicio de optar á los ascensos reglamentarios, debiendo disfrutar el sueldo, derechos, exenciones y privilegios que las leyes vigentes determinan en cuanto al ejercicio del Magisterio - Manila 15 de Marzo de 1888

El Director general, El Jefe de la Seccion de Fomento.

TITULO de Maestro de instruccion primaria á favor de D. Mariano Padilla y Claudio.

De este título se tomará razon en la Seccion de Contabilidad de esta Direccion general y en la Escuela Normal respectiva, sin cuyo requisito no será válido; debiendo además consignarse á continuacion por los Jefes de los mismos las fechas de los nombramientos, posesion y cese de cada escuela en que sirva la persona interesada

Registrado al fo 68 lib. 2.º nº 15.

PLATE II. CERTIFICATE ISSUED BY THE SPANISH NORMAL SCHOOL.

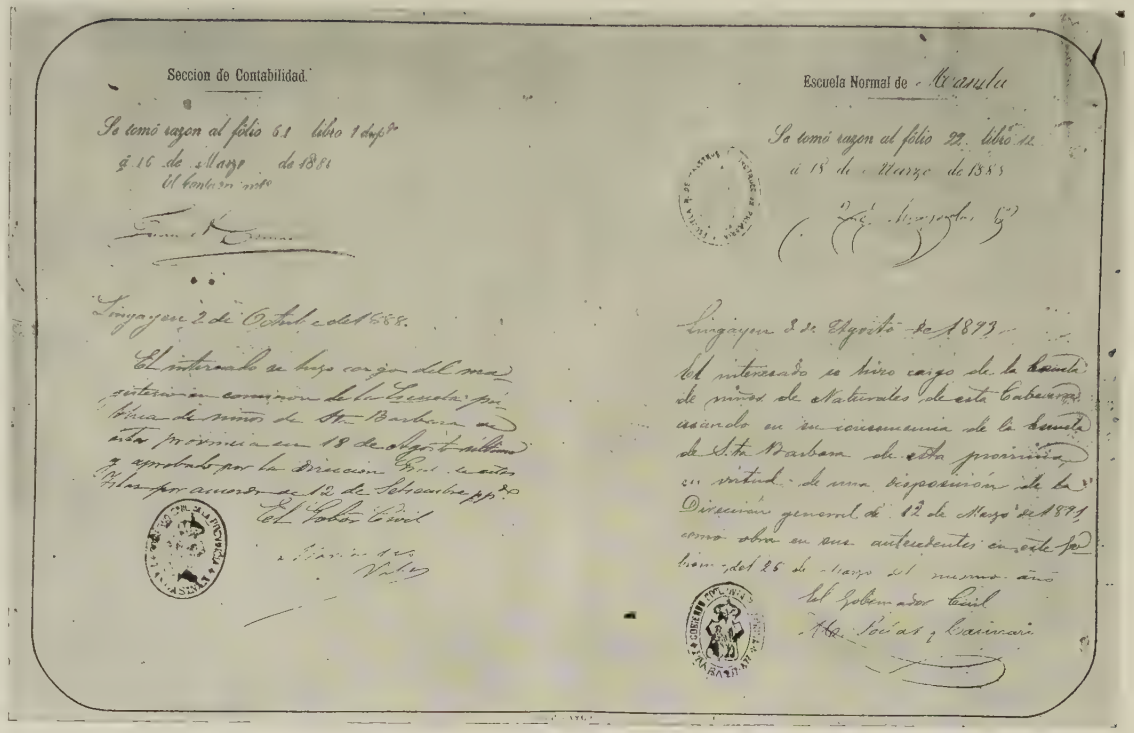
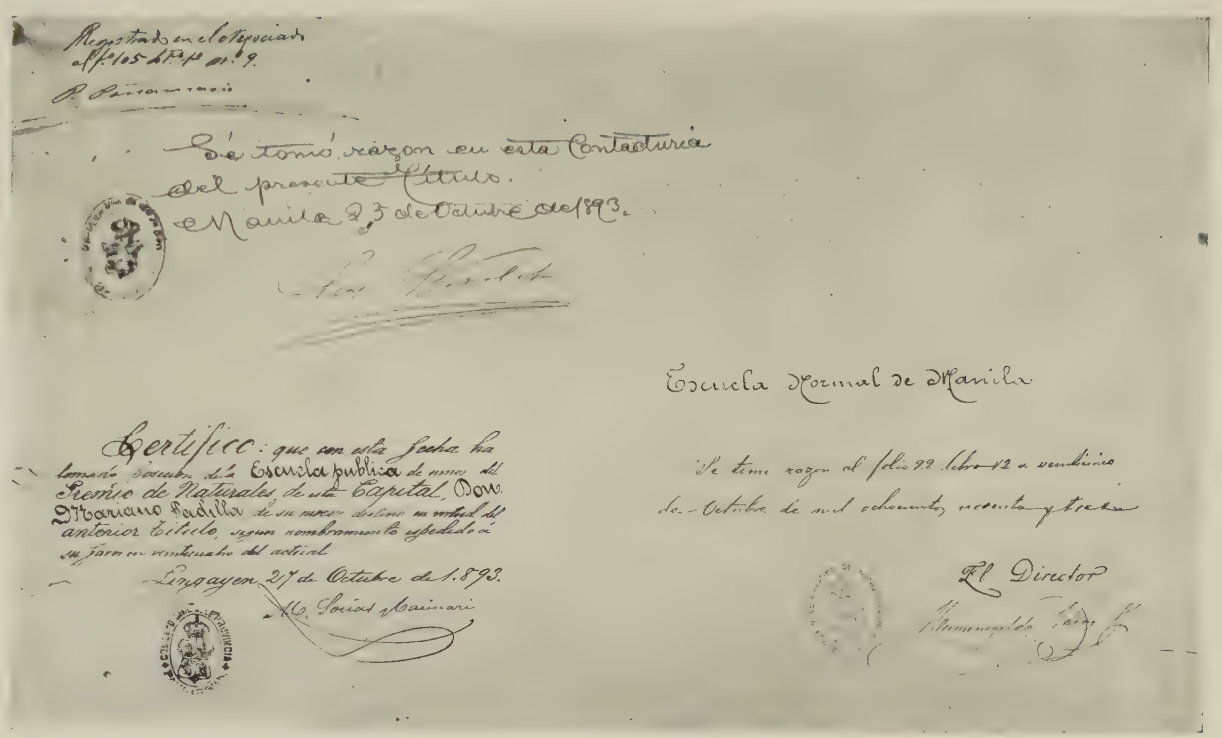


PLATE III. INDORSEMENT ON CERTIFICATE.



Registrado en el Negociado
del Fº 105 Libro nº 9.

Se tomó razon en esta Contaduría
del presente Título.
en Manila 23 de Octubre de 1893.

Escuela Normal de Manila

Certifico: que con esta fecha ha tomado posesion de la Escuela pública de niños del Premio de Naturales de esta Capital, Don. Dn. Mariano Padilla de su mismo destino en virtud del anterior Título, segun nombramiento expedido á su favor en veintinueve del actual.

Linguayen 27 de Octubre de 1893.

Se tomó razon al folio 99 Libro 12 á veintinueve de Octubre de mil ochocientos noventa y tres.

El Director

PLATE IV. INDORSEMENT ON CERTIFICATE.

NEUE HOMOPTEREN VON DEN PHILIPPINEN

Von L. Melichar

(*Brünn, Moravia, Austria*)

Ein Tafel

DIETYOPHORINÆ

Orthopagus (Udugama, Anagnia) philippinus sp. nov. (Taf. I, Fig. 1 u. 2.)

Scheitel doppelt so lang wie zwischen den Augen breit, zwischen den vorderen Augenecken eingeschnürrt, die Seitenränder geschärft und aufgerichtet, die Oberfläche zwischen den Augen zu einem kleinen schwarzen starkglänzenden Knopfe erhoben, welcher mit dem ebenso kallösen glänzenden schwarzen Höcker der Scheitelspitze zusammenhängt. Eine ebensolche schwarze runde Schwiele befindet sich an der Basis der Stirne am Ende des Mittelkieles, während die Seitenkiele an der Aussenseite von einer Reihe von schwarzen Makeln begleitet, sich oberhalb der Schwiele mit einander verbinden. Die Seitenkiele der langen Stirne konvergieren nach unten und reichen bis zur Clypeusnaht. Der Clypeus in der Mitte und an den Seiten gekielt, die untere Hälfte dunkelbraun, das Labrum an der Basis hellgelb; auf der Clypeusnaht 4 kleine dunkle Pünktchen die inneren einander genähert, die äusseren am Rande. In der oberen Wangenecke (zur Scheitelspitze) 3 schwarze Punkte, der 3. dicht am Rande, je eine kleine Makel vor der Ocelle, der Fühlergrube und am unteren Wangenrande. Pronotum halb so lang wie der Scheitel, hinten stark stumpfwinkelig ausgeschnitten, im Winkel selbst deutlich eingekerbt, auf der Scheibe mit 2 eingestochenen Punkten, zwischen denselben ein starker hellgelber Längskiel. Schildchen mit 3 Längskielen, der Mittelkiel stark, und wie die Schildchenspitze hellgelb. Die Flügeldecken hyalin, glashell, glänzend, mit gelblich braunen Adern, einer breiten halbmondförmigen Längsbinde am inneren Apikalrande ohne hyaline Randflecken, in welcher die Quernerven hellgelblich sind, und eine das Stigma nach innen überragende Längsmakel in der Mitte des Costalrandes. Stigma vierzellig. Auf den Seiten der braunen Vorderbrust eine helle breite schräge Binde. Der Bauch unregelmässig braun gefleckt. Die Vorderschenkel an der Unterkante erweitert, die Erweiterung vor der

Spitze zahnförmig abgesetzt, dunkel gefleckt und gebändert, die Schienen an der Basis und Spitze und zwei Ringe in der Mitte braun. Hinterschienen mit 6 schwarzen Dornen, an der Basis derselben schräge schwarze Striche. Vordertarsen und die Spitzen der hinteren Tarsenglieder braun.

Länge sammt Flügeldecken 12.5 mm. (♂, ♀).

LUZON, Los Baños, Mt. Maquiling (*C. F. Baker*).

Fünf Exemplare erhalten.

CIXIINÆ

Dystheatias punctata sp. nov.

Schmutzig zitronengelb oder rostgelb, mit schwarzen Punkten auf den Flügeldecken.

Scheitel quer viereckig, die Augen nicht überragend, der Hinterrand gerade, auf dem Scheitelrande 2 flache Eindrücke. Stirne zum Clypeus verbreitert, in der Mitte ein deutlicher Längskiel, welcher sich auf den Clypeus fortsetzt. Ocellen klein, die 3. Ocelle nicht vorhanden, Fühler kurz. Pronotum vorne gerade, den Hinterrand des Scheitels berührend, hinten winkelig ausgeschnitten. Schildchen von den Seiten zusammengedrückt, oben flach mit 3 parallelen Längskielen, von welchen der Mittelkiel besonders eleviert erscheint. Flügeldecken stark vertikal gestellt, nach hinten allmählig verbreitert, hinten schief nach vorne gerundet. Das Geäder mit feinen farblosen Körnchen ohne Härchen besetzt. Der äussere und innere Sektor ist im ersten Drittel des Coriums gegabelt, der mittlere Sektor einfach. Auf der Teilungsstelle der Clavusader, ein schwarzer Punkt, in der Mitte des Coriums 2 solche in einer Querlinie stehende Punkte, zuweilen treten noch am Costalrande 2 bräunliche Pünktchen auf; am Apicalrande an den Spitzen der Apicaladern schwarze Punkte. Flügel hyalin, nicht getrübt, die Unterseite und Beine blass gelblich, zuweilen grünlichgelb.

Länge 4–4.5 mm. (♂, ♀).

LUZON, Los Baños (*C. F. Baker*).

Dystheatias fuscovenosa sp. nov.

In der Form und Struktur der vorhergehenden Art gleich, nur sind die Sektoren rostbraun und mit ebensolchen Körnchen besetzt, das Geäder im Apicalteile ist mit der Grundfarbe (blass gelblich) gleich. Am Apikalrande dunkle Randpunkte.

Länge 4.5 mm. (♀).

LUZON, Los Baños (*C. F. Baker*).

Die Gattung *Dystheatias* Kirk. steht den Gattungen *Kirbyana*

Melich. und *Ptoleria* Stål sehr nahe. *Kirbyana* unterscheidet sich durch den winkelig ausgeschnittenen Vorderrand, *Ptoleria* durch den in der Mitte des Coriums gegabelten mittleren Sektor der Flügeldecken von *Dystheatias*.

Genus **BENNARIA** novum

Scheitel sehr schmal, stark reduziert, als schmaler nach hinten abfallender quer viereckiger Raum wahrnehmbar, so dass von oben der grösste Teil der Stirne sichtbar ist. Die Stirne von der Seite betrachtet gerundet, lang und schmal, die Ränder geschärft und aufgerichtet, die Stirnfläche glatt, ohne Mittelkiel. Clypeus kurz, in der Mitte und seitlich gekielt, an der Clypeusnaht die 3. Ocelle deutlich sichtbar. Rostrum dünn, bis zur Mitte des Hinterleibes reichend. Fühler kurz. Pronotum sehr schmal, hinten breit winkelig ausgeschnitten. Schildchen so breit wie lang, mit 3 parallelen Längskielen. Flügeldecken an der Basis schmal, nach hinten verbreitert, hinten quer gestutzt, mit abgerundeten Ecken. Verlauf der Adern wie bei *Benna* Walk. An den Seiten der Brust ein nach aussen vorstehendes stielartiges Organ, welches an der Spitze becherartig erweitert und mit weissem Sekret bedeckt ist (wie bei *Benna*). Flügel hyalin. Beine mässig lang, Hinterschienen ohne Dornen.

Von der Gattung *Benna* Walk. insbesondere durch die nicht gekielte Stirne zu unterscheiden.

Typ. gen: *Bennaria bimacula* sp. nov.

Bennaria bimacula sp. nov. (Taf. I, Fig. 3.)

Braun, die Kiele des Schildchens schwarz. Flügeldecken gelblich braun, mit einer grossen runden schwarzen Makel auf der Teilungsstelle des inneren Sektors. Das Geäder und die Costalrandader schwärzlich. Im Apikalteile 3 bogenförmige aus braunen Makeln zusammengesetzte Querbinden. Flügel rauchbraun, mit schwarzen Adern. Hinterleib dunkelbraun. Beine bräunlichgelb.

Länge 8 mm.

LUZON, Los Baños (*C. F. Baker*).

Ugyops granulatus sp. nov.

Gelblichbraun. Scheitel klein, trapezoidal, die Basis der Stirne von oben sichtbar, auf welcher die beiden Stirnkieläste in die Ecken des Scheitels einmünden. Stirne sehr lang, oben schmal, zum Clypeus etwas wenig verbreitert und dann wieder verengt. Die Ränder fein gekielt. In der Mitte der Stirn ein Längskiel

welcher sich im unteren Drittel gabelig teilt, die Gabeläste, dicht neben einander eine schmale Spalte bildend, münden in die vorderen Scheitelecken. Clypeus halb so lang wie die Stirne, in der Mitte und an den Seiten gekielt. Die Fühler lang, den Kopf weit überragend, das 1. und 2. Fühlerglied fast gleich lang, die Fühlerborste kurz. Pronotum etwas wenig länger als der Scheitel, vorne gerade gestutzt, hinten sehr schwach gebuchtet, fast gerade, oben mit 3 Kielen und 2 eingestochenen Punkten. Schildchen so breit wie lang, mit 3 Längskielen. Die Flügeldecken schmal, lang, 4 mal so lang wie einzeln breit, nach hinten nicht verbreitert, hinten einfach gerundet. Der äussere Sektor in der Mitte des Coriums gegabelt, der äussere Gabelast vor der Queraderlinie nochmals geteilt, der 2. Sektor einfach, der 3. Sektor hinter der Mitte geteilt. Aus der Queraderlinie entspringen 9 Apikaladern, von denen die 3. (von aussen) gegabelt ist. Die Apicalzellen sind sehr lang und schmal, der Apikalrand hat einen fein quergestrichelten Saum. Im Clavus eine Gabelader, deren Schaft in den Schlussrand mündet. Die ganze Coriumfläche ist mit feinen Körnchen besetzt, die auch zu beiden Seiten der Sektoren liegen. Die rauchbraune Apikalmembrane ist nicht gekörnt, nur die Apikaladern fein granuliert, so dass sie bei schiefem Lichte wie angenagt erscheinen. Flügel rauchbraun. Unterseite und Beine blass gelblich, die nicht besonders langen Hinterschienen mit 3 Dornen.

Länge 6 mm. (♀).

LUZON, Los Baños (*C. F. Baker*).

ACHILINÆ

Genus **TANGINA** Melichar

Tangina MELICHAR, Hom. Fauna Ceylon (1903), 44.
Eurynomeus KIRK, Bull. Haw. Sugar Pl. Assoc. (1906), 1, 422.

Tangina quadripunctulata sp. nov.

Blassgelb, die Unterseite heller. Auf der Scheitelspitze 2 schwarze Punkte, und auf dem Schildchen jederseits ausserhalb der Seitenkiele ein grosser schwarzer Punkt. Die Augen grau, am unteren vorderen Rande derselben eine schwarze Makel. Die Stirne ist etwas gewölbt, mit starkem Mittelkiel, die Ränder fein gekiel. Flügeldecken hyalin blassgelb, der äussere Sektor ist vor der Mitte des Coriums gegabelt, beide Gabeläste am Ende bogenförmig in die Costa einmündend. (Auf. Taf. II, Fig. 19b, *Tangina bipunctata* Mel. ist die Gabelung des 1. Sek-

tors nicht eingezeichnet.) Hinterschienen mit einem Dorn vor der Mitte.

Länge 3.5 mm.

LUZON, Los Baños (*C. F. Baker*).

Tangina quadrilineata sp. nov.

Scheitel quadratisch, nach unten geneigt, die Augen nicht überragend, in der Mitte fein gekielt. Die Stirne wie bei *T. bipunctata* Melich. gebildet, mit einem Mittelkiel, welcher sich auf den Clypeus fortsetzt. Kopf und Pronotum gelblichweiss. Schildchen gelb mit 2 schwarzen Punkten und zwar befindet sich jederseits ein Punkt in der vom äusseren Kiele und dem Schildchenrande gebildeten Ecke. Ein grosser schwarzer Punkt auf den Seiten der Vorderbrust. Flügeldecken hyalin, milchweiss, an der Basis mehr gelblich, mit 2 scharfen schwarzen Längsstreifen, der äussere Streifen befindet sich auf dem ersten Sektor und dem inneren Gabelaste derselben, der zweite nimmt den Schlussrand ein. Apicalmembrane übereinander geschlagen, rauchbraun. Flügel hyalin, milchig getrübt. Die Unterseite und Beine gelblichweiss. Hinterschienen mit einem kleinen Dorn vor der Mitte.

Länge 4 mm. (♂, ♀).

LUZON, Los Baños (*C. F. Baker*).

Majella philippina sp. nov.

Der Scheitel die Augen überragend, schmal, nach vorne verschmälert, die Seitenränder blattartig erweitert und aufgerichtet mit den gleichfalls blattartigen Rändern der Stirne in eine stumpfe Ecke zusammenstossend. In der Mitte der Scheitelfläche ein feiner Längskiel. Der Scheitel sowie die blattartigen Ränder derselben und der Stirne weiss, vor den Augen an den Seiten des Kopfes 3 schwarze Striche. Die Stirne dreieckig, oben einen scharfen Winkel bildend, nach unten verbreitert, die Seiten abgerundet, die Fläche schwarzbraun, mit einer weissen dreieckigen Makel in der oberen Stirnecke. Clypeus kurz, braun. Augen schwarz, Fühler kurz, gelblich. Pronotum sehr schmal, der Vorderrand zwischen den Augen bis zur Mitte derselben vorgeschoben, dunkel gefleckt, Pronotum so lang wie breit, mit 3 parallelen Längskielen, die Oberfläche schwarz und braun gefleckt, die hintere Partie zwischen den Seitenkielen einschliesslich, diese und die Schildchenspitze weiss, dasselbst 2 dunkle Punkte zwischen den Kielen und 2 braune Stricheln vor der Spitze. An diese weisse Makel schliesst sich ein schwarzer Längsstrich, der auf dem Mittelkiele liegt.

Flügeldecken länglich, hinten stark abschüssig, wie gebrochen, und übereinander geschlagen, braun, an der Costalseite mit roten Körnchen, auf den dunklen Adern mit weissen Körnchen dicht besetzt. Im Clavus am Schildchenrande ist ein kleiner hyaliner Fleck mit schwarzem Punkte auf der weissen Clavusader. In der rauchbraunen am Apikalrande schmal rot gesäumten Apikalmembrane sind die Apikaladern und Queradern weisslich, mit schwarzen Pünktchen besetzt. Am Stigma ein schwarzer glänzender Punkt mit rotem Hofe in Form eines Auges. Flügel rauchbraun, Unterseite schwarz, die Beine braun, die Schenkel schwärzlich, Hinterschienen mit einem kleinen Dorne in der Mitte.

Diese Art ist der australischen *M. majella* Kirk. ähnlich, doch nach der sehr kurzen Beschreibung Kirkaldy's lässt sich die Identität nicht feststellen.

Länge 3.5 mm.

LUZON, Los Baños (*C. F. Baker*).

Callinesia philippina sp. nov.

Gelblichbraun mit braunen Flecken gezeichnet. Scheitel etwas wenig länger als an der Basis breit, vorne gerundet, flach, die Seiten fein gekielt, auf der Scheitelspitze beiderseits des durchlaufenden Mittelkieles ein schwarzer Längsstrich. Stirne ziemlich breit, nach oben deutlich aber nicht stark verschmälert, in der Mitte gekielt, die Ränder fein gekielt und zum Clypeus gerundet. Die Stirne gelblichbraun, der Clypeus dunkler. Das Gesicht ist stark horizontal geneigt, der Scheitel nach unten abschüssig. Ocellen gross, rot, Fühler globulös. Pronotum halb so lang wie der Scheitel, vorne gebogen, hinten gebuchtet, in der Mitte gekielt, Schildchen hellgelb mit 3 hellen Längskielen, zwischen denselben vorne und hinten und an den Seiten braun gefleckt, Flügeldecken hyalin, mit zahlreichen braunen Flecken, welche 2 nach vorne und innen schräg laufende Binden bilden, am Costalrande mehrere schräge Striche und ein schwarzer Punkt an der Basis der 2. Apikalzelle. Die Apicalmembrane rauchbraun. Die Unterseite dunkelbraun, die Beine schmutzig gelblichbraun.

Länge 4.25 mm.

LUZON, Los Baños (*C. F. Baker*).

Zu dieser Gattung gehört: *C. fimbriolata* Melich., Hom. Fauna Ceylon, s. 47 (*Paratangia*).

Nysia alba sp. nov.

Etwas wenig grösser und breiter als *N. atrovenosa* Leth. Crêmeweiss, bloss das Schildchen blass gelb. Der Scheitelkiel

parallel, geschärft und aufgerichtet in die ebenso geschärften Seitenränder der Stirne bogenförmig (Seitenansicht) übergehend. Die Stirne parallel, zwischen die Augen sehr unbedeutend verschmälert, in der Mitte nicht gekielt. Clypeus klein dreieckig, gewölbt, an den Seiten gekielt. Fühler kurz, gelblich. Pronotum sehr schmal. Schildchen gewölbt, mit einem deutlichen Längskiel in der Mitte. Flügeldecken milchweiss, opak, mit weissen Adern, der äussere Sektor an der Innenseite, die äussere Clavusader auf beiden Seiten gekörnt. Verlauf der Adern wie bei *N. atrovenosa*. Sechs Apikalnerven, der 2. und 3. von aussen gerechnet gegabelt. Flügel hyalin, milchweiss. Hinterleibsrücken schwärzlich. Die Unterseite und Beine blass gelblichweiss. An der Hinterleibsspitze beim ♀ häufig weisses flockiges Sekret.

Länge 6 mm., Breite 1.5 mm. (♂, ♀).

LUZON, Los Baños (*C. F. Baker*).

Lamenia flavescens sp. nov.

Kopf, Pronotum und Schildchen rotgelb, Flügeldecken hyalin, schwach gelblichbraun tingiert. Augen schwarz. Der Scheitel ist quer viereckig. Die längliche Stirne in der Mitte nicht gekielt, die Seitenränder geschärft. Augen verhältnismässig sehr klein, schwarz. Unter den Fühlern eine deutliche lamellenartige Querleiste. Das Geäder der Flügeldecken dunkler, Flügel graulichbraun, mit dunklen Adern. Der Mittelkiel des stark gewölbten Schildchens ist stark, die Seitenkiele kaum angedeutet. Vor der Schildchenspitze eine tiefe Querfurche. Beine blassgelb.

Länge 4 mm.

LUZON, Los Baños (*C. F. Baker*).

RICANIINÆ

Pochazia marginalis sp. nov. (Taf. I, Fig. 4.)

Pechschwarz, matt. Stirne schwarz, in der Mitte mit einem feinen Längskiel versehen. Clypeus schwarz. Pronotum in der Mitte gekielt, mit 2 eingestochenen Punkten. Schildchen mit 3 Kielen, die inneren Gabeläste der Seitenkielen mit dem Mittelkiel vorne verbunden. Flügeldecken breit dreieckig, der Costalrand vor der Apicalspitze flach eingebuchtet, der Marginalrand konvex. Die Flügeldecken schwarz, ein länglicher Randfleck hinter der Mitte des Costalrandes und der ganze Marginalrand weiss hyalin. Die Costalrandader rostgelblich. Flügel rauch braun. Die Unterseite schwarz, Beine bräunlichgelb.

Länge 13 mm.; Spannweite 24 mm.

LUZON, Mt. Maquiling (*C. F. Baker*).

Pochazina bakeri sp. nov. (Taf. I, Fig. 5.)

Der *P. handlirschi* Melich. ähnlich, die Stirne, Unterseite und Beine lehmgelb, die Oberseite braun, die Flügeldecken mit grünlichem Schimmer auf der Diskalfläche und kupferartig glänzenden Impressionen am Costal- und Marginalrande. Hinter der Mitte der Costa nur ein schmutzig gelblicher hyaliner Keilfleck, in den Apikalecken und längs des Marginalrandes 3 kleine hyaline Punkte.

Länge 13 mm.; Spannweite 24 mm.

LUZON, Los Baños (*C. F. Baker*).

TAFELERKLARUNG

Tafel I

Fig. 1. *Orthopagus philippinus* sp. nov. Kopf und Thorax von oben gesehen.
2. *Orthopagus philippinus* sp. nov. Kopf von vorn.
3. *Bennaria bimacula* gen. et sp. nov.
4. *Pochazia marginalis* sp. nov.
5. *Pochazina bakeri* sp. nov.

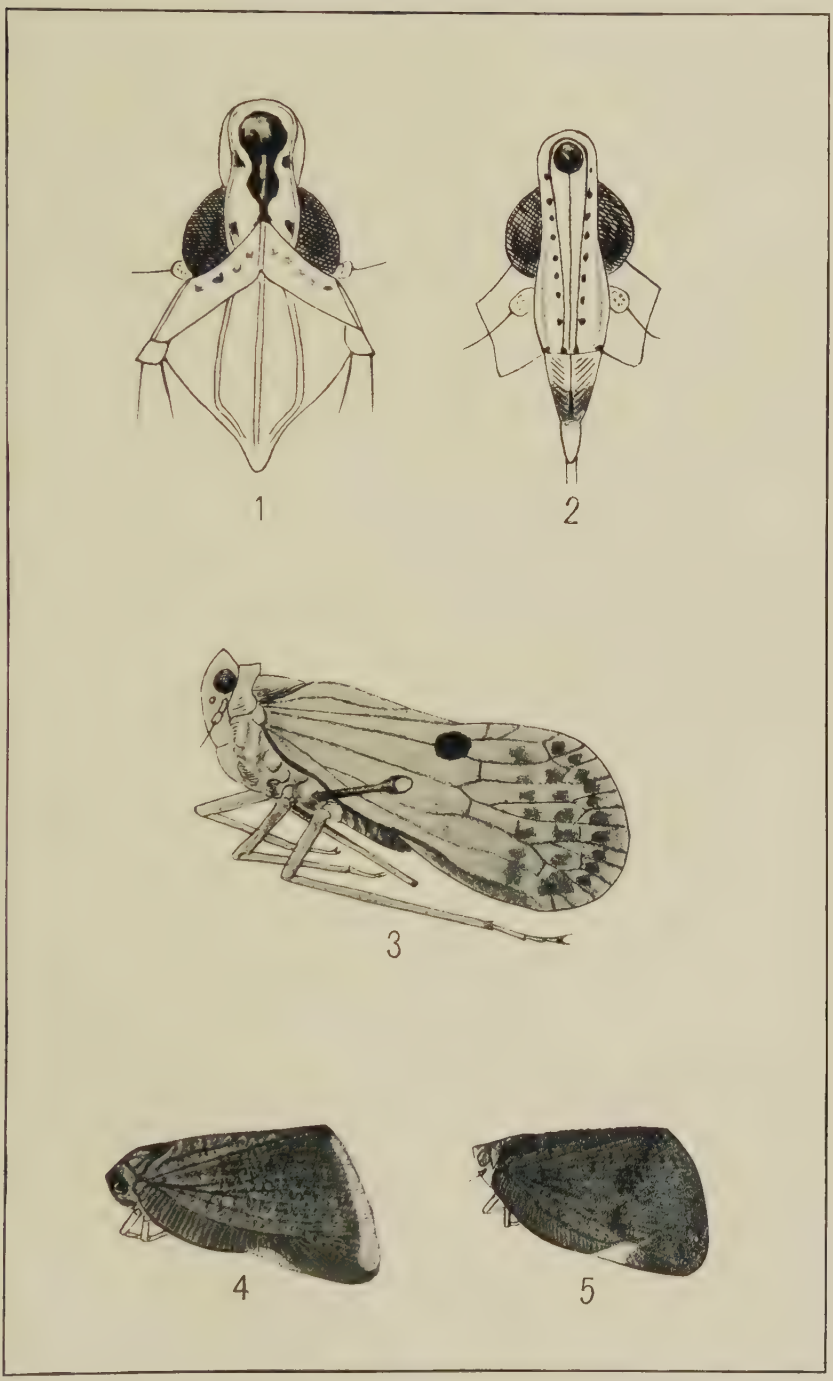


Fig. 1. Orthopagus philippinus sp. nov. Kopf und Thorax von oben gesehen. 2. Orthopagus philippinus sp. nov. Kopf von vorn. 3. Bennaria bimacula gen. et sp. nov. 4. Pochazia marginalis sp. nov. 5. Pochazina bakeri sp. nov.

TAFEL I.

NOUVEAUX CYNIPIDES DES PHILIPPINES

Par J. J. KIEFFER
(*Bitsch, Germany*)

I. EUCŒLINÆ

Genus **PROMIOMŒRA** Ashmead

Ashmead a donné une courte diagnose du genre *Promiomœra*, mais il n'a pas décrit l'espèce typique et jusqu'à présent on ne connaissait aucune espèce qui put s'y rapporter. Même l'espèce que nous allons décrire ne concorde pas entièrement avec la diagnose établie par Ashmead, les antennes n'étant pas filiformes, comme chez l'espèce observée par Ashmead, mais en massue.

Promiomœra rufithorax sp. nov. (♀.)

Noir, lisse et brillant; thorax d'un roux clair, antennes, hanches et pattes jaunes, massue antennaire noire. Les antennes se composent de 11 articles, dont les deux premiers sont gros, le 2e globuleux, 3–5 très minces, graduellement raccourcis, le 3e deux fois aussi long que gros, les 6 suivants subitement grossis, un peu plus longs que gros, le dernier en ovoïde. Thorax aussi haut que long; sillons parapsidaux nuls. Scutellum à fossettes petites, cupule médiocre. Ailes ciliées, stigmatique droite, trois fois aussi longue que la 3e partie de la sous-costale, un peu plus courte que le radius, cellule radiale un peu plus longue que large, ouverte à la marge dans sa moitié distale, aréole nulle. Abdomen avec une ceinture rousse à sa base, un peu comprimé, allongé, aussi long que le reste du corps.

Taille: 1 mm.

Localité: LUZON, Laguna, Los Baños (*C. F. Baker*).

Genus **SCHIZOSEMA** Kieffer

Schizosema cellularis sp. nov. (♂.)

D'un roux marron; vertex noir, antennes et pattes d'un roux clair. Front convexe, lisse et brillant comme tout le corps. Antennes composées de 14 articles et non de 15 comme d'ordinaire, articles 3–14 subcylindriques, un peu plus longs que gros, subégaux; 3e article non excavé ni grossi. Thorax pas plus long que haut, sillons parapsidaux nuls. Scutellum avec une impression transversale en avant, sans fossettes, cupule petite, élevée. Ailes longues, ciliées, échancrées en arrière de l'extrémité alaire,

nervures pâles, cellule radiale ouverte à la marge, exactement semicirculaire, cubitus oblitéré dans sa 1er partie, bien marqué et percurrent dans la 2e. Abdomen sans ceinture à sa base, à peine comprimé, plus long que le thorax, moitié antérieure plus sombre que le thorax, moitié postérieure plus claire que le thorax.

Taille: 1.2 mm.

Localité: LUZON, Laguna, Mont Maquiling (*C. F. Baker*).

Genus **COTHONASPIS** Hartig

Cothonaspis (Hexaplasta) minima sp. nov. (♀.)

Noir, lisse et brillant; articles antennaires 3–7 roussâtres, pattes d'un blanc brunâtre. Antennes de 13 articles, dont les 6 derniers sont subitement grossis, deux fois aussi gros que les précédents, presque deux fois aussi longs que gros, subcylindriques et munis de quatre arêtes percurrentes et dépassant un peu leur extrémité, 13e article ellipsoïdal, 3–8 beaucoup plus minces que les deux premiers, subcylindriques et serrés, le 3e deux fois aussi long que gros, le 4e un peu plus long que gros, 5–7 pas plus longs que gros. Thorax très convexe, subglobuleux. Sillons parapsidaux nuls. Fossettes du scutellum petites, cupule assez grande, elliptique, avec un point enfoncé en avant et un autre en arrière. Ailes hyalines, longuement ciliées, nervures brunes, cellule radiale triangulaire, ouverte à la marge dans les deux tiers distaux, un peu plus longue que large, 3e partie de la sous-costale ponctiforme, radius un peu plus long que la stigmatique, cubitus oblitéré dans sa 1er partie, percurrent et bien marqué dans la seconde. Abdomen comprimé, un peu plus long que le thorax, ceinture étroite.

Taille: 0.8 mm.

Localité: LUZON, Laguna, Los Baños (*C. F. Baker*).

Genus **EUCŒLIDEA** Ashmead

Eucœlidea maquilingensis sp. nov. (♀.)

Noir, lisse et brillant; mandibules, hanches et pattes d'un roux jaune. Tête transversale vue d'en haut, triangulaire et plus haute que large vue de devant. Yeux allongés et glabres, reliés à la bouche par un sillon oblique. Joues égalant les deux tiers de la longueur des yeux. Antennes de 13 articles, dont le 2e est globuleux, 3–13 filiformes, pubescents, graduellement raccourcis, le 3e presque trois fois aussi long que gros, plus mince que les autres, le 12e un peu plus long que gros, un peu plus court que le 13e. Thorax aussi haut que long, très convexe.

Pronotum profondément découpé en arrière. Mesonotum pas plus long que large, sillons parapsidaux percurrents, profonds, réunis un peu avant le bord postérieur, vers le $\frac{1}{5}$ postérieur, en une arête qui atteint le bord. Scutellum sans fossettes en avant, tout le dessus étant occupé par la cupule qui est elliptique et creusée en ellipse, surface postérieure perpendiculaire. Ailes hyalines, dépassant beaucoup l'abdomen, brièvement ciliées, nervures brunes, cellule radiale pointue, fermée, deux fois et demie aussi longue que large, 3e partie de la sous-costale et stigmatique très obliques, la stigmatique de moitié plus longue que la 3e partie de la sous-costale, radius deux fois et demie aussi long que la stigmatique, aréole nulle, cubitus évanoui en avant, percurrent dans sa 2e partie. Pétiole aussi long que gros; abdomen très comprimé, ayant sa plus grande hauteur en arrière, ceinture nulle.

Taille: 1.8–2 mm.

Localité: LUZON, Laguna, Los Baños et Mont Maquiling (*C. F. Baker*).

II. LIOPTERONINÆ

Genus **ALLOCYNIPS** novum

♂. Tête vue de devant trapézoïdale, vue de dessus très transversale. Yeux gros, allongés, glabres, touchant le bord occipital, d'un tiers plus longs que les joues. Vertex avec deux arêtes qui vont du côté externe de chaque scape jusqu'au bord occipital, un espace triangulaire et relevé, bordé par une arête, va en s'élargissant depuis les antennes jusqu'au bord occipital, où il renferme les ocelles disposés en triangle. Palpes maxillaires de 5 articles, les labiaux de 3. Antennes filiformes, situées un peu avant le milieu des yeux, presque deux fois plus distantes de la bouche que du bord occipital, composées de 14 articles. Thorax deux fois aussi long que haut, peu convexe. Pronotum découpé en angle postérieurement, son milieu presque ponctiforme et portant une spinule courte et verticale, les lobes atteignent les écaillettes. Mesonotum allongé, pointu en avant, sillons parapsidaux percurrents. Scutellum allongé, graduellement aminci en arrière, presque horizontal, avec deux fossettes en avant. Metathorax en cône horizontal et court, terminé par un anneau auquel s'insère le pétiole, comme chez *Aulacinus*. Ailes pubescentes, cubitus ayant son origine au-dessus du milieu de la basale, cellule cubitale unique et fermée, cellule radiale fermée aussi au bord alaire. Tous les tarses plus longs que les tibias, dépourvus d'appendices, pattes posté-

rieures grossies, crochets tarsaux simples. Pétiole aussi long que gros, inséré au-dessus des hanches postérieures, abdomen aussi long que le thorax, graduellement grossi en arrière où il est obtus, non comprimé, 2e tergite à peine plus long que le 3e, non liguliforme quoique ses côtés soient graduellement rétrécis, 3e et 4e subégaux, 5e à peine plus court que le 4e, égal au 6e, tous deux déclives, 7e perpendiculaire et semicirculaire, les 3 derniers grossièrement sculptés. Le type est *Allocynips ruficeps* sp. nov.

Allocynips ruficeps sp. nov. (♂.)

Noir, lisse et brillant. Tête d'un roux clair, avec une ponctuation grosse et dense. Palpes rouges. Antennes à peine plus courtes que le corps, d'un noir brillant, scape le plus gros, de moitié plus long que gros, 2e article presque transversal, 3e égalant les 2 premiers réunis, deux fois aussi long que gros, 4–14 graduellement amincis, trois à quatre fois aussi long que gros. Prothorax d'un roux clair, lobes du pronotum à points gros, ombiliqués et denses. Mesonotum traversé par des arêtes transversales et assez denses, sillons parapsidaux profonds, divergents fortement en avant. Scutellum réticulé, à cellules ombiliquées, les deux fossettes grandes et séparées seulement par une arête. Metathorax mat, grossièrement ridé, pubescent de blanc. Ailes antérieures enfumées, cellule sous-costale, médiane et sous-médiane presque hyalines, cellule radiale et cubitale et une bande le long du bord en arrière de la cellule radiale d'un brun noir, cellule cubitale étroite, deux fois aussi longue que large, cellule radiale de moitié plus longue que la cubitale, trois fois aussi longue que large, 2e partie du radius double de la 1e, 3e triple de la 2e, presque droite, cubitus percurrent. Ailes inférieures enfumées dans leur moitié distale, avec 3 crochets frénaux et la nervation ordinaire des Cynipides. Pattes antérieures et intermédiaires, y compris les hanches, d'un roux clair, pattes postérieures à hanches deux fois aussi longues et deux fois aussi grosses que les intermédiaires, leur tibia et leur tarse densément pubescent de gris, métatarse égalant les 4 articles suivants réunis, les articles 2–4 graduellement raccourcis, 5e égalant les 3 précédents réunis. Pétiole avec 2 arêtes convergentes en avant, moitié antérieure du 5e tergite, 6e et 7e tergite en avant couverts de points denses et très gros; les tergites se prolongent latéralement au-delà des sternites en forme de lobes translucides.

Taille: 7.5 mm.

Localité: Luzon, Laguna, Mont Maquiling (*C. F. Baker*).

TWO NEW CYPRINOID FISHES OF THE GENUS BARBUS FROM LAKE MANGUAO, PALAWAN, P. I.

By Artemas L. Day

(From the Department of Zoölogy, College of Liberal Arts, University of the Philippines)

One plate

During the long vacation at the end of the University year 1912–13, a joint expedition from the University of the Philippines and the Bureau of Science was made to Palawan Island in the interest of biological study. The party proceeded to Taytay, a village of about 30 houses on a bay of the same name. From the Coast and Geodetic Survey, I had learned of the presence of a lake supposed to be southwestward of Taytay. Exploration led to the location not only of one lake near Taytay, but of two, one of them, however, being more of a swamp full of grass than a lake except in the rainy season.

Lake Manguao is about 5 kilometers long from east to west and from 2.5 to 3 kilometers wide from north to south. The greatest depth discovered was 7 fathoms, a little to the southeast of Bamboo or Cemetery Island, between the island and the shore. There are very many islands in the lake, perhaps as many as 25. These vary in size from a mere point of rock to those having an area of perhaps 1 hectare.

Two trips were made to the larger of these lakes, Lake Manguao, from which the new species of fishes, described in this paper, were taken. With the exception of the shore along the south side of the lake, which was mainly a sandy beach, there was a shelving shore and small rock fragments, in many places falling precipitously into the water. Some of the fishes were taken from the extreme northeastern part of the lake nearest to the town of Bantolan, but most were taken on the western side near the site of the second camp. Many of the larger fishes were readily caught with hook and line. The smaller ones were taken in large numbers on a small net of cheesecloth baited with cooked rice. This was placed in shallow water and raised when a considerable number of fishes were feeding above it.

In this paper, "length of body" is the distance from the tip of snout to the end of the caudal vertebræ; "length of head" means from the tip of snout to the posterior margin of the hard opercle; "length of caudal peduncle" covers the distance from the posterior margin of anal to the uncovered ventral margin of the caudal fin; "length of snout" refers to the distance

from the median anterior point of the snout to the nostril; "snout to occiput" covers the distance from the tip of the snout to the posterior median dorsal line of the head; "height of dorsal" and "height of anal" refer to the distance from the distal ends of the longest rays to their proximal ends, even though they may be somewhat covered by scales at their proximal ends.

Barbus bantolanensis sp. nov.

Length of head 2.85 to 3.2 in total length; depth of body 2.5 to 2.9 in total length; diameter of eye 5.3 to 5.8 in head, that is, to the posterior margin of the hard opercle; diameter of eye 1.84 to 2.06 in interorbital space and 1.08 to 1.35 in snout; rostral barbel 1 to 1.3 in diameter of eye and ⅔ to ⅘ in maxillary barbel.

Type, No. 2.

Measurements of 6 specimens of *B. bantolanensis* are given in Tables I and II.

TABLE I.—*Measurements of Barbus bantolanensis sp. nov.*

	Specimen No.—					
	1	2	3	4	5	13
	Per cent.[a]	*Per cent.*[a]	*Per cent.*[a]	*Per cent.*[a]	*Per cent.*[a]	*Per cent.*[a]
Length of body	[b] 89	[b] 118	[b] 102	[b] 105	[b] 107	[b] 115
Length of head	0.320	0.313	0.352	0.314	0.336	0.353
Depth of body	0.382	0.377	0.352	0.366	0.390	0.345
Depth of caudal peduncle	0.140	0.152	0.137	0.147	0.168	0.128
Length of caudal peduncle	0.185	0.169	0.171	0.176	0.168	0.176
Length of snout	0.073	0.080	0.088	0.081	0.070	0.088
Diameter of eye	0.067	0.059	0.063	0.061	0.065	0.061
Interorbital width	0.101	0.122	0.122	0.119	0.120	0.123
Depth of head	0.213	0.228	0.230	0.228	0.219	0.247
Snout to occiput	0.230	0.245	0.240	0.240	0.240	0.256
Snout to dorsal	0.601	0.601	0.607	0.633	0.602	0.626
Snout to ventral	0.533	0.533	0.578	0.542	0.562	0.566
Length of dorsal base	0.157	0.156	0.151	0.166	0.154	0.154
Length of anal base	0.089	0.084	0.088	0.109	0.093	0.079
Height of dorsal	0.202	0.199	0.215	0.209	0.205	0.207
Height of anal	0.157	0.165	0.156	0.142	0.158	0.163
Length of pectoral	0.174	0.177	0.215	0.193	0.177	0.216
Length of ventral	0.174	0.169	0.186	0.180	0.186	0.190
Length of caudal	0.314	0.305	0.343	0.333	0.336	0.347
Dorsal rays[c]	III-8	III-8	III-8	III-8	III-8	III-8
Anal rays[c]	III-5	III-5	III-5	III-5	III-5	III-5
Scales in lateral line	26	25	25	26	26	26
Scales above lateral line	4½	4½	4½	4½	4½	4½
Scales below lateral line	4	4	4	4	4	4
Scales before dorsal	9	9	9	9	9	10

[a] Referred to length of body. [b] Measurement in millimeters. [c] Spinous and soft rays, respectively.

TABLE II.—*Proportional measurements of Barbus bantolanensis sp. nov.*

Proportional measurement.	Specimen No.—					
	1	[a]2	3	4	5	13
Head in body	3.06	3.05	2.79	3.04	2.97	2.82
Depth in body	2.61	2.62	2.70	2.69	2.48	2.89
Eye in head	4.83	5.42	5.66	5.30	5.14	5.71
Snout in head	4.14	3.45	4.05	3.45	3.60	3.63
Interorbital space in head	3.22	2.81	2.80	2.65	2.70	2.92
Third dorsal spine in head	1.70	1.94	1.92	1.81	2.00	2.10
Dorsal	III-8	III-8	III-8	III-8	III-8	III-8
Anal	III-5	III-5	III-5	III-5	III-5	III-5
Scales	26:$\frac{4\frac{1}{2}}{4}$	25:$\frac{4\frac{1}{2}}{4}$	25:$\frac{4\frac{1}{2}}{4}$	26:$\frac{4\frac{1}{2}}{4}$	26:$\frac{4\frac{1}{2}}{4}$	26:$\frac{4\frac{1}{2}}{4}$
Scales between lateral line and base of ventrals	$2\frac{1}{2}$	$2\frac{1}{2}$	$2\frac{1}{2}$	$2\frac{1}{2}$	$2\frac{1}{2}$	$2\frac{1}{2}$
Distance from tip of snout to base of dorsal in distance from tip of snout to end of caudal vertebræ	0.601	0.621	0.607	0.628	0.626	0.637
Pharyngeals	[b]2-5-3-2	(?)	2-5-3-2	[c]2-5-3-2	[c]5-3-2	[d]4-2-1
Origin of ventrals	midway between origin of pectorals and of anal.					(e)

[a] Type. Plate I, fig. 1.
[b] 2. As some were missing, the arrangement could not be definitely determined.
[c] Another pharyngeal was found; it was probably of the first row.
[d] Several pharyngeals were missing.
[e] Origin of ventrals is 0.474 of distance from origin of pectorals to origin of anal.

Barbus manguaoensis sp. nov.

Length of head $2\frac{3}{4}$ to 3 in total length; depth of body 2.5 to 2.7 in total length; diameter of eye 4 to 6 in head; interorbital width $2\frac{1}{3}$ to $3\frac{1}{4}$ in head, that is, to the posterior margin of the hard opercle; diameter of eye $1\frac{1}{2}$ to $2\frac{3}{4}$ in interorbital space and 1 to $1\frac{2}{3}$ in snout; posterior barbel $1\frac{1}{3}$ times as long as the diameter of eye and $\frac{4}{5}$ of the length of the maxillary barbel; third dorsal spine strong, strongly serrated, and $1\frac{1}{2}$ to $2\frac{1}{3}$ in head; anterior side of the first dorsal spine 0.57 to 0.61 of the distance from the snout to the end of the vertebræ; origin of dorsal porterior to origin of ventral. A distinct large black ocellus over the end of the caudal vertebræ, one above base of anal, one above base of ventrals, and one elongated area above posterior margin of opercle. These spots are more or less connected by not very distinct broad black bands.

Type, No. 15.

Measurements of 6 specimens of *Barbus manguaoensis* are given in Tables III and IV.

TABLE III.—*Measurements of Barbus manguaoensis sp. nov.*

	Specimen No. and sex.					
	6♀.	9♀.	15♂.	26♂.	29♀.	31♀.
	Per cent.[a]	*Per cent.*[a]	*Per cent.*[a]	*Per cent.*[a]	*Per cent.*[a]	*Per cent.*[a]
Length of body	[b]117	[b]132	[b]89	[b]54	[b]52	[b]59
Length of head	0.350	0.329	0.325	0.324	0.317	0.336
Depth of body	0.401	0.371	0.387	0.370	0.384	0.364
Depth of caudal peduncle	0.153	0.141	0.142	0.129	0.157	0.142
Length of caudal peduncle	0.179	0.193	0.172	0.185	0.182	0.184
Length of snout	0.098	0.088	0.084	0.083	0.076	0.089
Diameter of eye	0.059	0.056	0.067	0.083	0.076	0.084
Interorbital width	0.126	0.121	0.101	0.111	0.105	0.117
Depth of head	0.239	0.229	0.224	0.222	0.230	0.226
Snout to occiput	0.269	0.242	0.235	0.240	0.250	0.260
Snout to dorsal	0.640	0.621	0.634	0.620	0.615	0.630
Snout to ventral	0.575	0.575	0.550	0.527	0.528	0.537
Length of dorsal base	0.153	0.161	0.162	0.160	0.163	0.168
Length of anal base	0.094	0.091	0.108	0.092	0.102	0.084
Height of dorsal	0.192	0.185	0.191	0.231	0.240	0.218
Height of anal	0.141	0.141	0.146	0.157	0.168	0.159
Length of pectoral	0.205	0.174	0.207	0.208	0.211	0.210
Length of ventral	0.179	0.166	0.179	0.185	0.192	0.184
Length of caudal	0.324	0.300	0.337	0.342	0.336	0.325
Dorsal rays[c]	III–8	III–8	III–8	III–8	III–8	III–8
Anal rays[c]	III–5	III–5	III–5	III–5	III–5	III–5
Scales in lateral line	27	28	27	27	27	27
Scales above lateral line	4½	4½	4½	4½	4½	4½
Scales below lateral line	4	4	4	4	4	4
Scales before dorsal	9	9	9	9	9	9

[a] Referred to length of body.
[b] Measurement in millimeters.
[c] Spinous and soft rays, respectively.

TABLE IV.—*Proportional measurements of Barbus manguaoensis sp. nov.*

Proportional measurement.	Specimen No.—					
	6	9	[a]15	26	29	31
Head in body	2.92	3.00	3.06	3.000	3.150	2.83
Depth in body	2.48	2.75	2.57	2.840	2.600	2.79
Eye in head	5.71	5.86	3.16	3.750	4.125	4.66
Snout in head	3.32	4.00	3.56	4.030	4.125	3.81
Interorbital space in head	2.76	2.66	3.16	2.916	2.750	3.00
Third dorsal spine in head	2.27	2.20	1.74	1.520	1.540	1.75

[a] Type, Plate I, fig. 3.

TABLE IV.—*Proportional measurements of Barbus etc.*—Continued.

Proportional measurement.	Specimen No.—					
	6	9	[a]15	26	29	31
Dorsal	III-8	III-9	III-8	III-8	III-8	III-8
Anal	III-5	III-5	III-5	III-5	III-5	III-5
Scales	27:$\frac{4\frac{1}{2}}{4}$	28:$\frac{4\frac{1}{2}}{4}$	27:$\frac{4\frac{1}{2}}{3\frac{1}{2}}$	27:$\frac{4\frac{1}{2}}{4}$	27:$\frac{4\frac{1}{2}}{3\frac{1}{2}}$	27:$\frac{4\frac{1}{2}}{4}$
Scales between lateral line and base of ventrals	$2\frac{1}{2}$	$3\frac{1}{2}$	$2\frac{1}{2}$	$2\frac{1}{2}$	$2\frac{1}{2}$	$2\frac{1}{2}$
Distance from tip of snout to base of dorsal in distance from tip of snout to end of caudal vertebræ	0.662	0.625	0.629	0.615	0.615	0.608
Pharyngeals	[b]5-3-2	[b]5-3-2	[b]2-5-2-2	[b]5-3-1-?	[b]4-2	[b]2-5-3-2
Origin of ventrals	[c]	midway between origin of pectorals and origin of anal.				

[a] Type, Plate I, fig. 3.

[b] 2. As some were missing, the arrangement could not be definitely determined.

[c] Origin of ventrals, 0.532 of distance fro morigin of pectorals to base of anal.

In comparing these new species with *Barbus ivis* Seale and *B. palawanensis* Boulenger, certain striking differences of body proportions are apparent. The length of head in body is much less, the diameter of eye in depth of body is much greater, the depth of head in body is less, the distance from snout to occiput is much less, the length of base of dorsal in body is more, the height of dorsal and of anal in body is more, and the length of pectoral in body is more in *B. ivis* and *B. palawanensis* than in the two new species here described.

In these two new species, not only are there three rows of pharyngeals as stated by Günther,[1] but another row was discovered consisting of three pharyngeal teeth, so that the pharyngeals are 3–5–3–2 instead of 5–3–2. The extra row of pharyngeals was also found in specimens of *Barbus ivis* Seale and *B. palawanensis* Boulenger.

Unfortunately, several specimens of the species here described were dissected before the extra pharyngeals were discovered. But because of the fact that they were definitely determined in several specimens and because a part of the pharyngeals of this extra row were seen in several other specimens, there can be no doubt of the existence of the extra row, and it is undoubtedly always present in both of these species. In some of the fishes dissected, as in *B. bantolanensis*, No. 45, from which the drawing of the pharyngeals was made, these pharyngeals are very minute. The microscope is often necessary to identify them.

[1] *Cat. Fishes Brit. Mus.* (1868), 7, 3 and 84.

Those of the extra row differ from the other pharyngeals in being not inserted in the bone, but embedded in the tissue surrounding the bone. They may thus be easily detached and lost unless great care is used in the dissection.

While working on the species of this paper, I had access to the type specimen of *Barbus ivis* Seale, taken by Seale on Balabac Island, August 11, 1908, and to other specimens of this species and several specimens of *Barbus palawanensis* Boulenger, collected by Seale at Puerto Princesa, Palawan, on August 20, 1909. I wish to acknowledge the valuable assistance rendered by Mr. Seale while I was working on these species and to express my appreciation for the use of his private library on the Cyprinidæ.

BIBLIOGRAPHY

GILL, THEODORE. Some noteworthy extra-European Cyprinids. *Smithsonian Misc. Colls.* (Quarterly Issue) Feb. 4 (1907), 48, 297–341.

BOULENGER, G. A. List of fresh-water fishes collected by A. Everett on Palawan and Balabac. *Ann. & Mag. Nat. Hist.* (1905), VI, 25, 185–188.

JORDAN, DAVID STARR, and EVERMAN, BARTON WARREN. The Fishes of North and Middle America. Part I. *Bull. U. S. Nat. Mus.* (1896), No. 47, 199–329.

SYDNER, JOHN O. The fishes of the streams tributary to Monterey Bay, California. *Bull. Bur. Fish.* (1912), 32.

SEALE, ALVIN. New species of Philippine fishes. *Phil. Journ. Sci., Sec. A* (1909), 4, 494–495.

GÜNTHER, ALBERT. Catalogue of the Physostomi. *Cat. Fishes Brit. Mus.* (1868), 7, 12–372 (Cyprinidæ).

ILLUSTRATIONS

PLATE I

FIG. 1. *Barbus bantolanensis* Day, sp. nov. No. 2. (Drawn by Rodolfo Fajardo.)

2. Pharyngeal of *B. bantolanensis*, No. 45; A, the additional row of teeth. (Drawn by Rodolfo Fajardo.)

3. *Barbus manguaoensis* Day, sp. nov. No. 15. (Drawn by José Santos.)

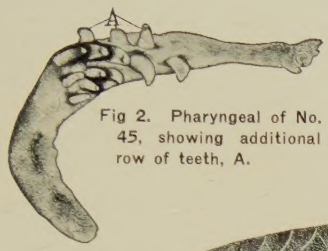


Fig 2. Pharyngeal of No. 45, showing additional row of teeth, A.

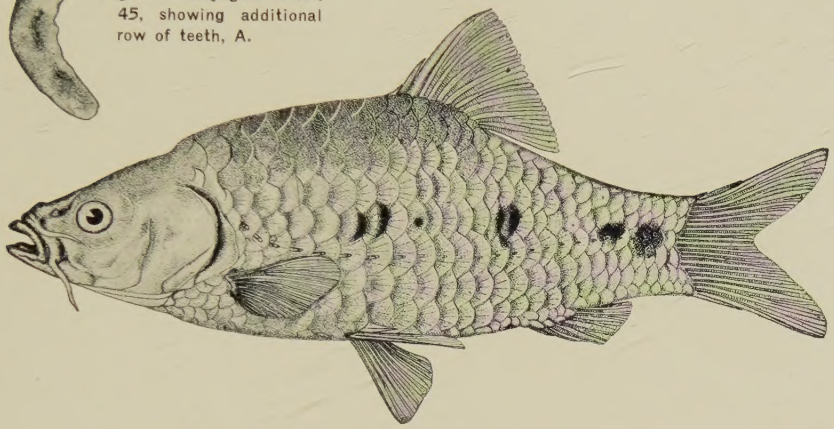


Fig. 1. Barbus bantolanensis Day, sp. nov. No. 2.

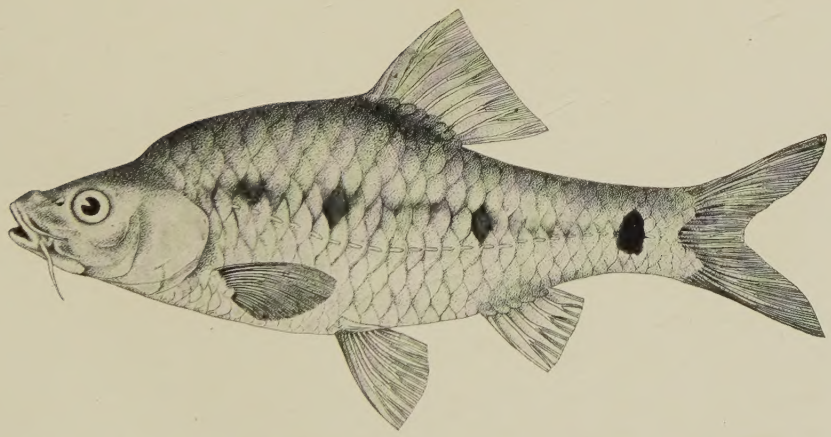


Fig. 3. Barbus manguaoensis Day, sp. nov. No. 15.

PLATE I.